

FLIGHT

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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EDITORIAL COMMENT.

The Monaco Aerial Rally.

Last week we were able to publish the full details of the Monaco Aerial Rally, one of the most important events that has ever been attempted in connection with aviation. As will have been gathered from the details given, seven routes have been fixed, with their starting places at important European centres, and competitors will be required to cover distances of roughly 800 miles across sea and country. There is no need to repeat all the details, but there is one aspect that appeals to us and that is that, generally speaking, the Press of this country has hardly deigned to notice that such an affair is in contemplation. One or two of the most important newspapers, notably those whose interest in aviation is proverbial, have mentioned that it is toward, but further than that there seems to be total lack of interest in it. We are not making any complaint about this. Indeed, when one comes to think of it, there is no necessity for complaint, because the prevailing attitude seems to indicate that such events as these have become akin to the commonplace. It is a text from which we have often preached, and we have no desire to labour the point, but aviation is still

young enough to cause us to marvel at its progress day by day. Therefore, we cannot but read into the apathy—or comparative apathy—we have noted evidences of that progress which has in so few short years brought the science to a point where its possibilities are accepted as of no more than a passing news interest.

In the matter under review, we have been watching our daily papers for information of what has been done or what is going to be done by the seven and twenty entrants who intend to take part in this most interesting "rally," but apparently the foreign correspondents no longer regard these things as important enough to cable. Think of it! The preparations for a competition such as this, involving cross-flights by every competitor of nigh upon a thousand miles, hardly worth the expenditure of two-pence-half-penny a word to record! And when we think that it is but four or five years ago the same journals kept a special staff of correspondents waiting and watching for days to see the first conquest of the Channel by a heavier-than-air machine! Can anything more significant, more eloquent of progress be imagined? We think not.

Looking down the columns of the *Daily Mail* the other day, we noticed that the fact that it is now possible to travel from London to Margate by motor 'bus was thought worthy of the best part of half a column of space, while not even a paragraph was devoted to the Monaco Rally. As we have said, we are not complaining, but simply endeavouring to point the moral, that flying now has become very much like using a taxi or a motor omnibus. Yesterday it was very wonderful. To-day it is no more so—and that is all there is about it.

A Practical Suggestion.

We read in a communication from the American Aeronautical Society that that body has proposed to the Panama-Pacific Exposition authorities that in place of the round-the-world air race projected in connection with the opening of the Canal there should be substituted one from the East coast of America to the West, *via* the Panama Canal. The reasons given for the Society's recommendation are that such a contest would arouse great enthusiasm, be of lasting benefit to the industry in America, and would probably attract a fair field of entries.

We must say that we are fully in accord with the Society in its views. Ultimately, there is no manner of doubt that the earth will be circled by aeroplane, but

large as is our faith in flight, we do not think the time is yet. While we have done what we could to encourage the idea, we have always tempered our encouragement with the caution born of the belief that the Exposition authorities were, to say the least, somewhat premature and ambitious in their plans. To speak quite frankly, we do not think there was ever the remotest chance of this round-the-world race materialising this year or next.

We know that, especially in connection with flight, it is utterly unsafe to prophesy unless with exact knowledge in hand, but this first plan savours too much of trying to run before we have learned to walk properly. With regard to the now suggested race round the Northern American continent, there are not the same objections to be urged. It is ambitious enough in all conscience, but

not unduly so. Indeed, we see no reason whatever why the journey should not be safely and securely accomplished, given that organisation and arrangements are made reasonably perfect, and that the time schedules are not too severely drawn.

Accompanying the official communique from the American Society are many expressions of opinion from leaders of the industry and prominent flying men, practically unanimous in condemnation of the original round-the-world race, and favouring the revision of the affair in accordance with the Society's suggestion. We may therefore take it as being practically certain that the first plan will not be persisted in. If it is, then we see nothing but failure in front of it. It has nothing to commend it, while the latest idea certainly carries with it the stamp of practicality and usefulness.



Easter at Hendon.

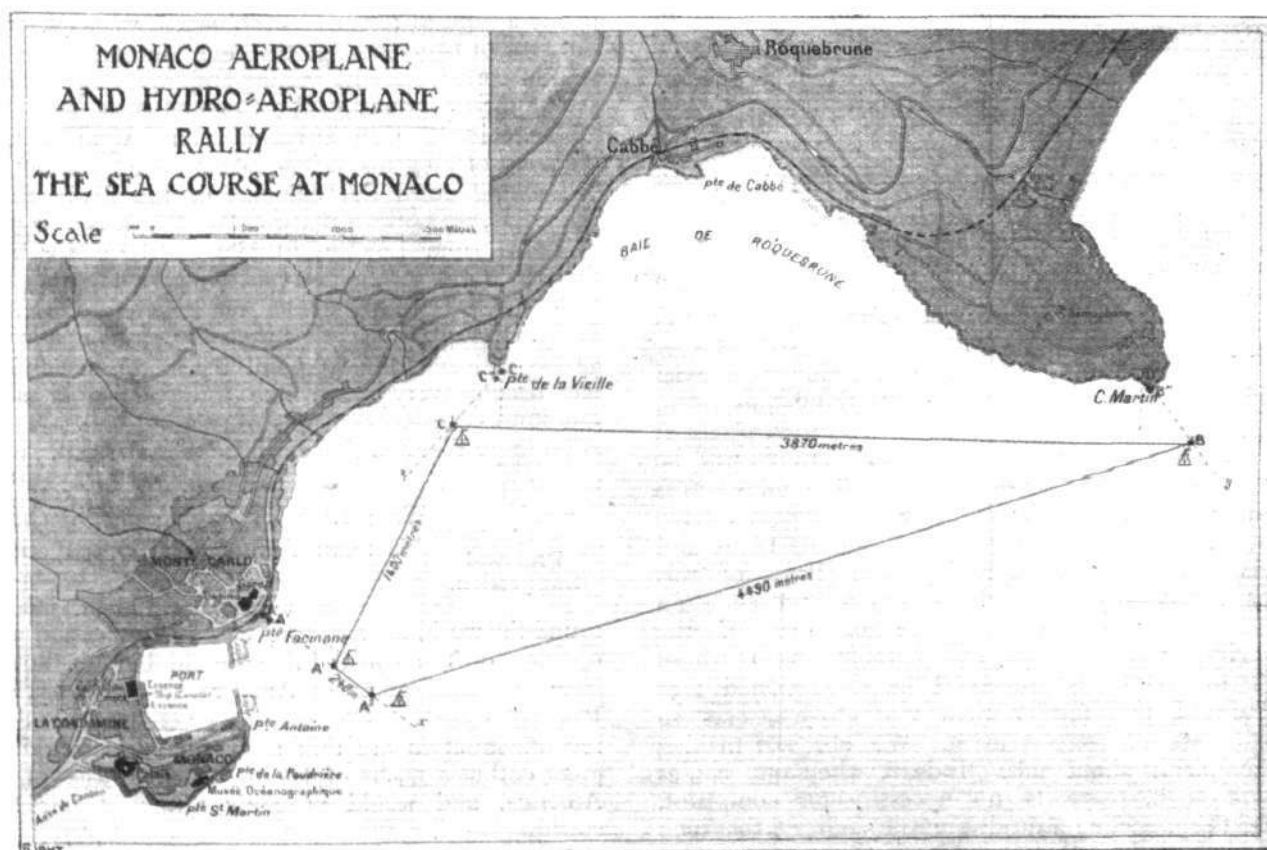
THE five days' meeting which has been arranged to take place at Hendon during the Easter Holidays will inaugurate the summer season at Hendon, and holiday makers may look forward to a wonderful display of flying. Thursday afternoon's programme will be devoted to exhibition and passenger flights. In addition to demonstrations of "looping the loop" and upside-down flying, the twelve-mile speed contest for the "Shell" Trophy will be flown on Good Friday, the programme commencing at 3 p.m. Saturday's contests will include a twenty-mile cross-country race and a quick-starting competition, and on Sunday afternoon special flying displays will be given by Mr. Gustav Hamel and other well-known Hendon aviators. The Bank Holiday events include special exhibition flights commencing at 12 noon, the grand speed handicap for the Barclay Walker Trophy at 3.30 p.m., and "looping" displays by Mr. Gustav Hamel.

"Animal Flight."

READERS of FLIGHT are, of course, well aware of the extraordinary amount of time and labour which Dr. E. H. Hankin has given to the study of bird flight—and of soaring flight in particular—

and the book which he has recently published under the above title is certain of a warm welcome at the hands of all who are interested in the theory of aeronautics. Since the publication of his "Study in Bird Flight," which appeared in these columns during the last four months of the year 1911, Dr. Hankin has made further observations, not only of large birds in India but also of flies, bats, flying fish, &c., and the results of these observations are included in this book.

As Dr. Hankin points out in the preface, the book is a record of observations, and in India the author had exceptional opportunities of observing great soaring birds having a wing span of from 7 ft. to 11 ft., while he went to great lengths to see that his observations were accurate in all details. Not only has Dr. Hankin recorded what happens to the wings in flight, but he has gone to considerable trouble in endeavouring to find out and explain how it happens and why. The book is written mostly in non-technical language, and the few technical terms employed are fully explained both in a glossary and in footnotes. What is even more satisfactory is that there is a very complete index, while the illustrations number 98. The book is published by Messrs. Iliffe and Sons, Ltd., at the price of 12s. 6d.



The sea course in Monaco bay which has to be covered by the competitors in the aeroplane rally, particulars of which were given in last week's issue.

MEN OF MOMENT IN THE WORLD OF FLIGHT



THE FIVE PILOTS WHO, AT HENDON AERODROME, EACH FOR THE FIRST TIME
LOOPED THE LOOP ON WEDNESDAY LAST WEEK.

FLYING AT HENDON.

A SERIOUS epidemic of *aerobopitis* broke out at Hendon on Thursday afternoon of last week, which affected five well known Hendon pilots in a very pronounced manner, and it is expected that others will also succumb. A good attendance of visitors turned up to witness the usual exhibition and passenger flights, and with a light north-easterly wind blowing the weather kept fine. At 3 o'clock, R. H. Carr came out on the G.-W. tractor biplane "Lizzie" and climbing to a height of 800 feet executed, much to everyone's surprise, a perfect loop, following it up with another one shortly after. These loops were well formed, Lizzie turning over in excellent style and, as we were informed later, very easily. About an hour afterwards, Carr went up again, and at the same altitude made three more loops, making a total of five. At about the same time, F. W. Goodden ascended on the two-year old 45 h.p. (Anzani) Caudron, and climbing to a height of 1,500 feet, he also executed two loops in equally fine style. He repeated his performance about half an hour afterwards, bringing his total of loops to four. This was not the end of the looping, however, for during the afternoon three more pilots were stricken with the ailment. These were J. L. Hall, Louis Noel, and L. A. Strange; Hall ascended to a height of 1,000 feet on his 50 h.p. Avro, and made one complete loop, whilst Noel and Strange put up two loops each, piloting Lizzie, with the greatest possible ease. The total number of loops, therefore, made by the five stricken ones was 14. In addition to the above looping displays several exhibition and passenger flights were made by the various pilots, including Philippe Marty on the 80 h.p. Blériot, W. Birchenough, and Strange on G.-W. 'buses, and Noel on the Maurice Farman.

The first Spring meeting last Saturday was held under Spring conditions indeed, and although still somewhat wet under foot the fine weather brought up a large number of visitors. The first to ascend was L. A. Strange on the 50 h.p. G.-W. 'bus No. 109, Philippe Marty with a passenger following shortly after on the 80 h.p. Blériot, whilst Louis Noel on the Maurice Farman and W. Birchenough on the other G.-W. 'bus also took the air. Two loopers, F. W. Goodden on the 45 h.p. Caudron, and R. H. Carr on Lizzie, then ascended almost simultaneously. Goodden made the first loop at a height of about 1,000 ft., Carr making the next at a similar height, and a second one shortly after. Goodden made his second loop at about 800 ft., and then executed some fine spirals before landing. Carr put up a third loop at 700 ft., and also made some steeply banked spirals before landing. In the meanwhile J. L. Hall was up on his Avro, but did not join in the looping. A start was then made for the cross-country handicap to Bittacy Hill and back four times, the competitors being as follows: L. A. Strange, on the G.-W. 'bus 109 (6 mins. 7 secs.); W. Birchenough, on the other G.-W. 'bus (5 mins. 37 secs.); Louis Noel, on the Maurice Farman (3 mins.); R. H. Carr, on Lizzie (34 secs.); and Philippe Marty, with a passenger on the 80 h.p. Blériot (scratch). Marty came home an easy first, with Noel, who flew very low on entering

the aerodrome, 35 secs. behind. Strange went out of his course on his second lap and retired, whilst Birchenough also flew a wrong course and was not placed, so third place went to Carr, who was 19 secs. behind Noel. Immediately after the race, E. F. Norris went up on the G.-W. 'bus 109, and Goodden ascended once more and executed two more loops at 1,000 ft., whilst Marty and Noel took up a passenger each on the Blériot and Maurice Farman respectively. All interest was then centred round two new comers—Herr Thelen, the well-known German pilot, and the fine Albatros biplane. The latter is a magnificent piece of work, but as we deal with this machine in detail elsewhere in this issue, we will confine our remarks to its first public performances in the air at Hendon. After a preliminary run of the engine Thelen took the machine up for a test flight, rising in splendid style after a run of some 20 yds. or so, and rapidly climbing to an altitude of over 1,000 ft. After remaining up for about 5 mins., during which he executed some very fine banked turns, he descended, making an excellent landing, and pulling the machine up in a remarkable manner by means of the "plough" brake. He then made another flight with a passenger, climbing rapidly to a height of 1,500 feet and putting the machine through several evolutions; this particular biplane appears to have a very good speed range, and flies in a particularly steady manner. After this flight the machine was returned to the hangar. The rest of the evening was devoted to further exhibition and passenger flights, put up by the following:—Hall on the Avro with passengers, R. J. Lillywhite, M. Osipenko, and Birchenough (with passengers) on G.-W. 'buses, Noel with passengers on the Maurice Farman, and Marty with passengers on the Blériot. Carr gave another demonstration of looping on Lizzie, making three complete loops at heights varying from 1,000 to 800 feet. Later, Strange took over the same machine and made two well-formed loops at 600 and 500 feet respectively, Noel doing a *vol pancake* on the Maurice Farman near by during the last loop. On descending, Strange handed over Lizzie to Noel who made two very fine loops each at a height of 600 feet and almost over the same part of the aerodrome each time; in all therefore, 14 loops were made during this afternoon. Just as the various machines were being returned to the hangars, at 6.10 p.m., a Blériot was seen approaching the aerodrome from the west. This proved to be Henri Salmel, who had been expected earlier in the afternoon, on the *Daily Mail* Blériot which he had flown over from Paris. He was accompanied by T. Elder Hearn, who obtained his pilot's certificate in France some little time back, and both reported an exceedingly pleasant journey. They left Paris at 10 a.m. that morning, arriving at Folkestone at 2.30 p.m., where they stayed until 4 o'clock when they resumed their journey. Great difficulty, however, was experienced in keeping a correct course to Hendon owing to the mist that enveloped various parts of the country, and their arrival at the aerodrome was thus considerably delayed. As it was too late in the evening to fly on to Manchester as had been originally intended, the machine was put up for the night, and as this was being done A. L. Barrs, who just recently obtained his ticket at the Grahame-White School, made the last flight of the evening on a 35 h.p. Deperdussin monoplane.

Cross-Country Handicap. (16 miles)	Handicap. m. s.	Handicap. Time. m. s.
1. Philippe Marty (80 h.p. Blériotmonoplane) ...	scratch	23 36
2. Louis Noel (70 h.p. M. Farman biplane) ...	3 0	24 11
3. R. H. Carr (50 h.p. G.-W. tractor biplane) ...	0 34	24 30
W. Birchenough (50 h.p. G.-W. biplane) ...	5 37	
L. A. Strange (50 h.p. G.-W. biplane) ...	6 7	

Dull, rainy weather made matters very unpleasant for both visitors and pilots on Sunday afternoon, but despite the unfavourable conditions there was no lack either of visitors or flying. Philippe Marty made several flights with passengers on the Blériot, R. H. Carr put up some more looping on "Lizzie," Louis Noel took up several passengers (mostly of the fair sex) on the Maurice Farman, and executed *vol pancakes*, and L. A. Strange was busy on the G.-W. 'bus. It will be seen, therefore, that even rain will not damp the proceedings at Hendon.

A 9-mile speed handicap will be the principal event for this (Saturday) afternoon's April meeting, which opens at 3.30 p.m.



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Herr Thelen in the cockpit of the Albatros.



The Forlanini airship as seen cruising near Rome.

THE 100 H.P. ALBATROS BIPLANE.

EVIDENTLY the German constructors have confidence in the ability of their products to compete against machines of British manufacture, for again a German machine—

drawings and illustrations this week, arrived at Hendon on the morning of Friday last on its lorry, and was in the air the same afternoon.

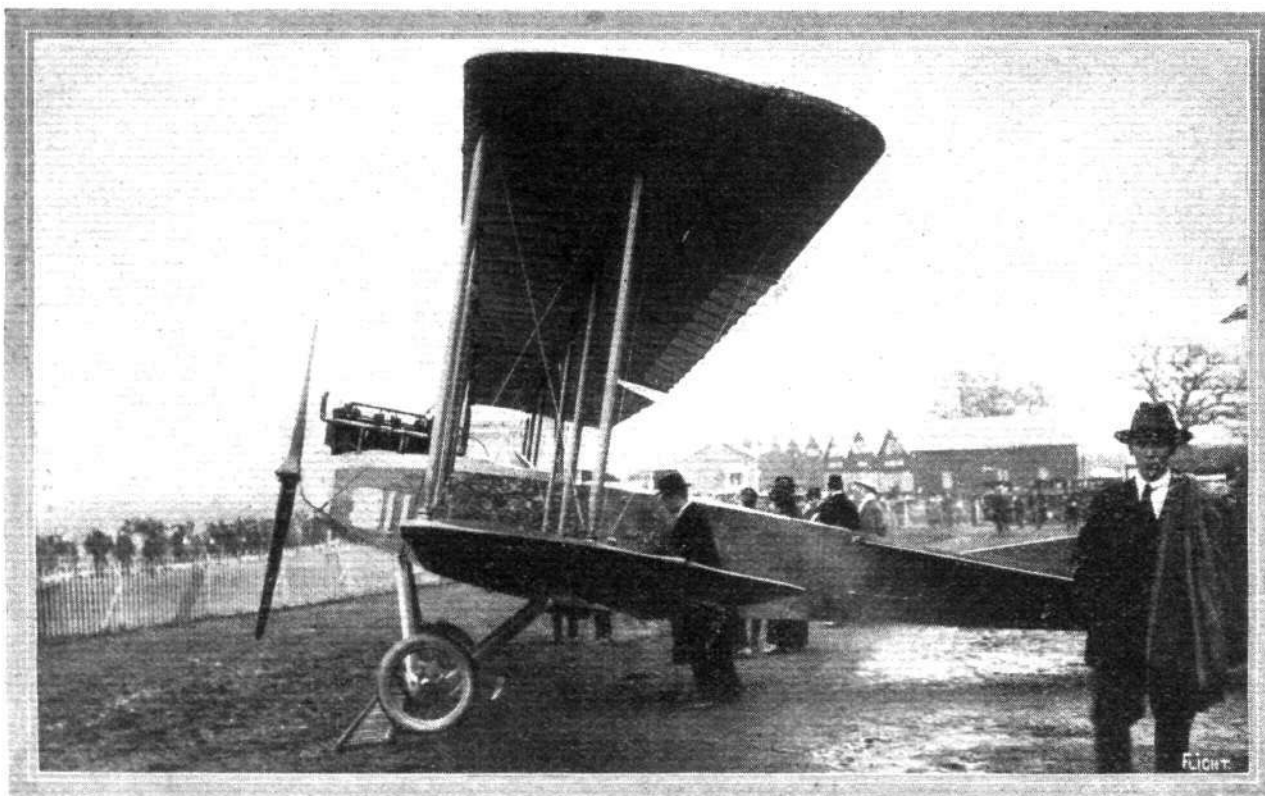


THE ALBATROS BIPLANE.—View from in front.

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this time a 100 h.p. Albatros biplane—has arrived in this country with a view to being submitted to tests at Farnborough. As regards workmanship and soundness of construction, this latest arrival to these shores must be admitted to be equal to the best of British machines, and

After giving the engine—a 100 h.p. Mercedes—a preliminary run, the pilot, Herr Robert Thelen, had the machine wheeled up on the pier in front of the Grahame-White offices, and, when warned against the soft ground at the end of the pier, he laughingly replied that he would

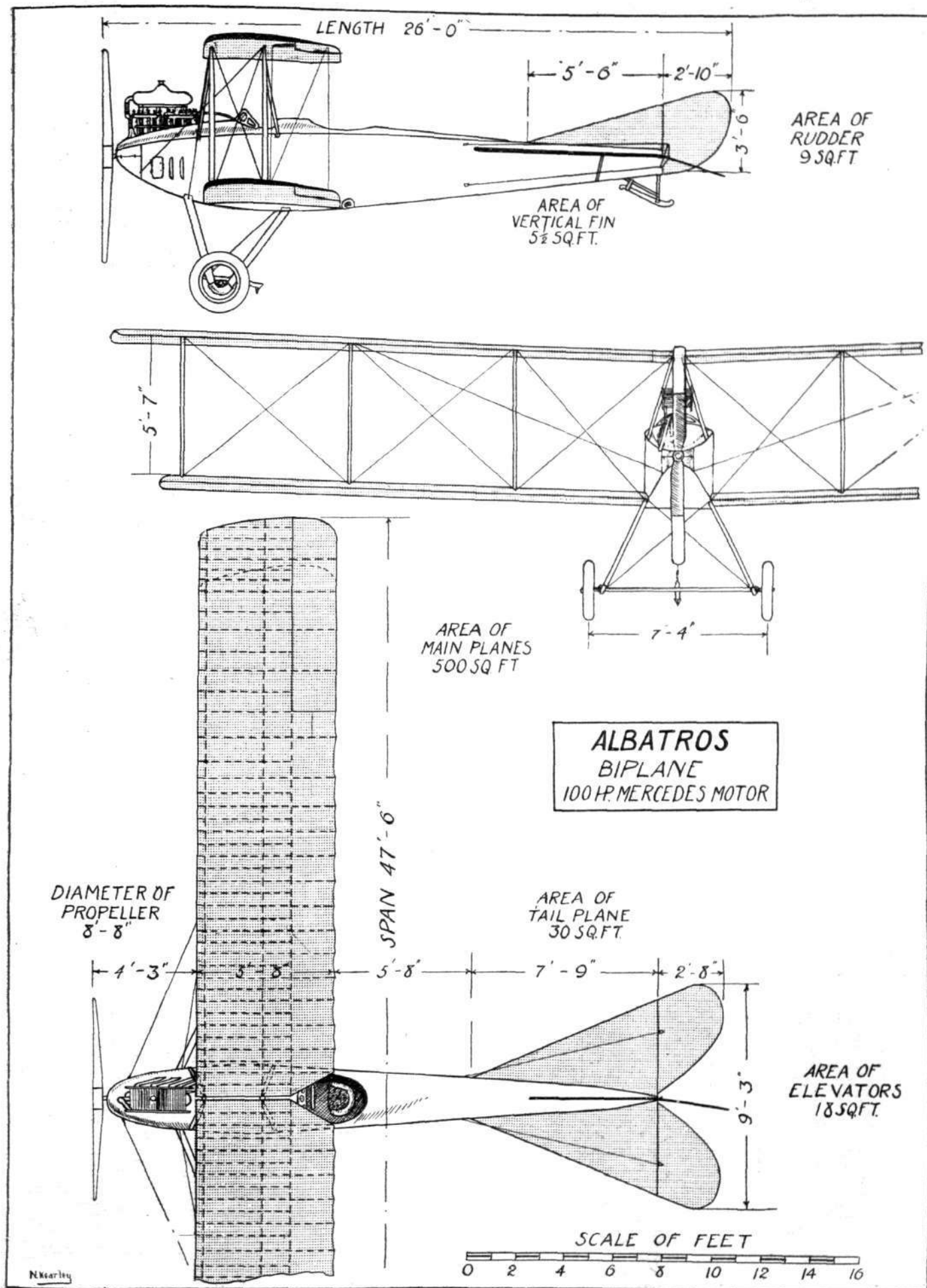


THE ALBATROS BIPLANE.—Side view.

"Flight" Copyright.

judging by the amount of flying done on these machines in Germany and the popularity that they have attained in that country, there is every reason to believe that they are as efficient aerodynamically as they are robust constructionally. The machine, of which we publish scale

be off by the time he got to the soft ground. As the wheels reached the end of the pier the nose of the machine shot upwards, the tail skid touched the ground and the great biplane climbed upwards at an angle reminiscent of the little Sopwith flown by Mr. Hawker.

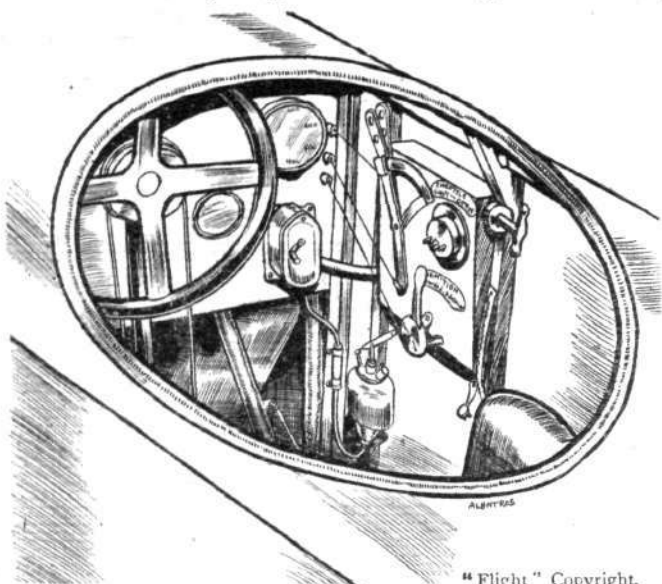


THE ALBATROS BIPLANE.—Plan, side and front elevations to scale.

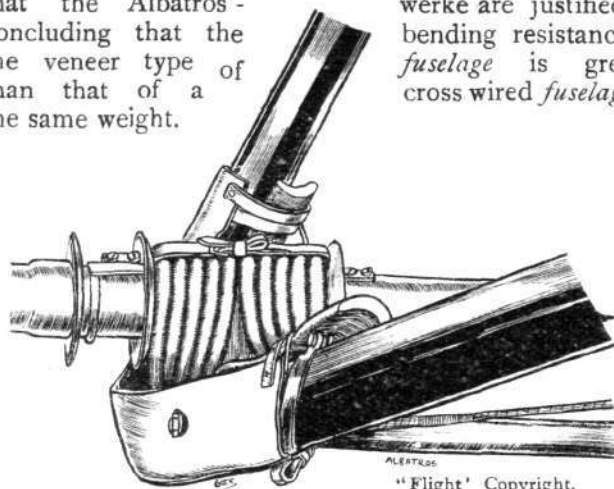
Like the majority of German machines, the Albatros biplane is of the tractor type, but the wings are straight, as seen in plan view, instead of being swept backwards as in several other machines hailing from that country. Among the many interesting features the construction of the fuselage is worthy of notice, for it is built up without the use of the ordinary diagonal cross bracing, the necessary

rigidity being obtained by the covering, which is of three-ply-wood.

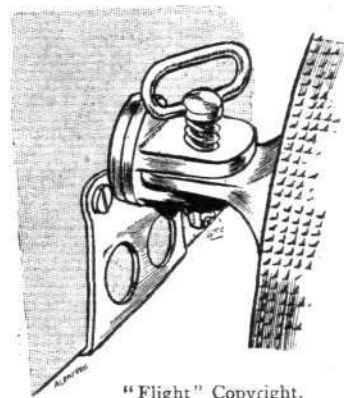
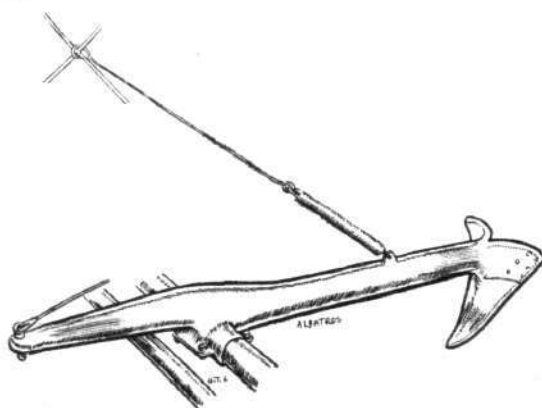
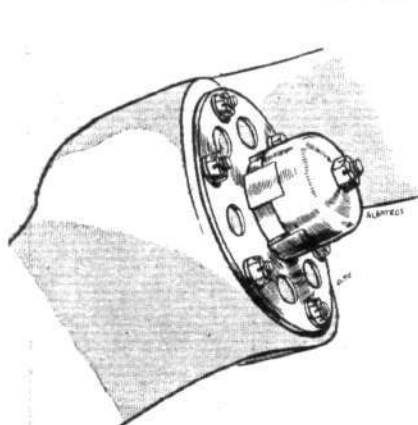
According to calculations carried out by the Albatroswerke and corrected by *Deutsche Versuchsanstalt für Luftfahrt*, the factor of safety of the fuselage of the Albatros biplane is about 60, and the bending resistance of this type of fuselage is 2.5 times greater than that of a diagonally wired fuselage of the same outside dimensions and having members of the size usually employed in structures of this type. The *Versuchsanstalt* also states that the Albatros-werke are justified in concluding that the veneer type of fuselage is greater than that of a cross wired fuselage of the same weight.



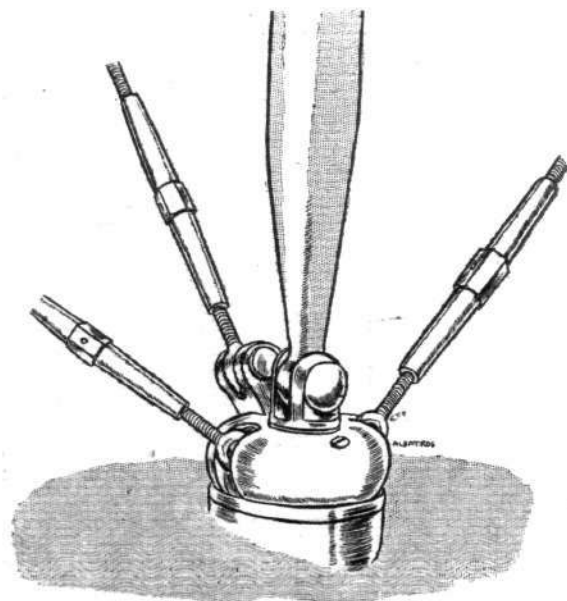
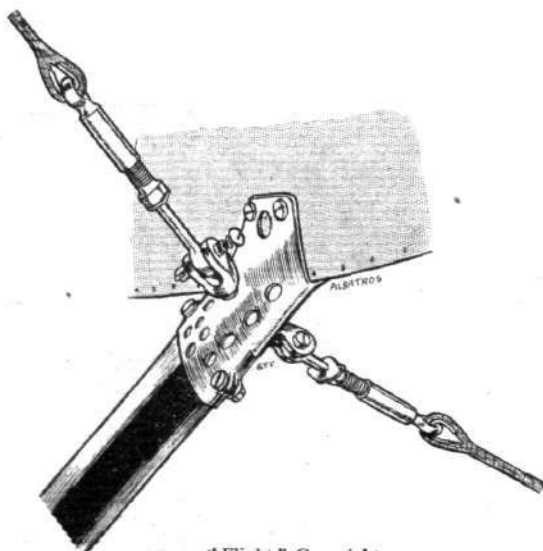
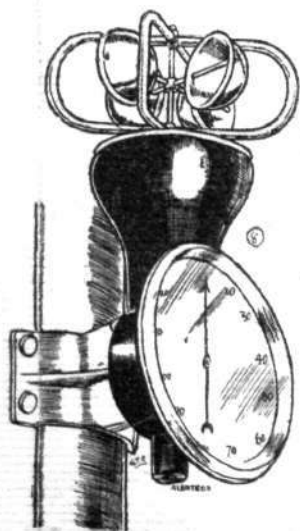
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Pilot's cockpit on Albatros.



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Detail of shock absorbing arrangement on Albatros.



Left, method on Albatros of locking propeller on engine shaft; centre, the hand operated brake; and right, attachment of lower plane to fuselage.



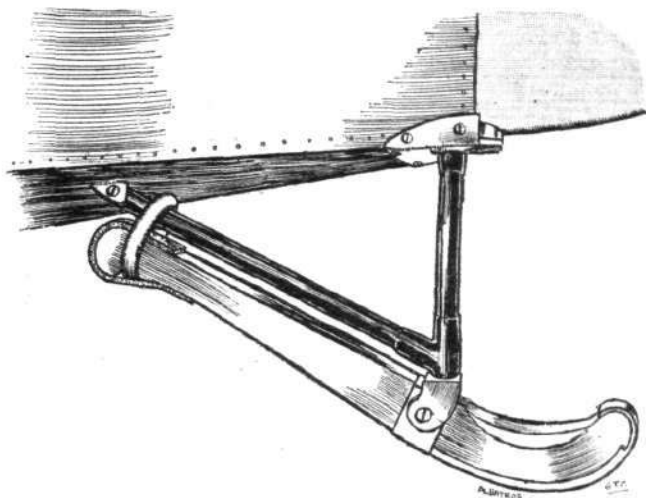
"Flight" Copyright.
Left, the anemometer on the Albatros which is mounted on one of inter-plane struts. Centre, a chassis detail, and right, attachment of inter-plane struts and cross bracing cables to main spars.

There are six *longerons* of ash, one in each corner of the rectangular section *fuselage* and one about half-way up each side. The struts are also of ash, and occur at frequent intervals along the whole length of the *fuselage*. The three-ply covering is tacked to struts and *longerons*. From the nose up to a point in front of the tail fin the deck of the *fuselage* is given a streamline form by means of a curved turtleback, whilst the under surface is flat.

The 100 h.p. Mercedes engine is mounted on strong ash bearers in the nose of the *fuselage*, and the radiator, as will be seen from the accompanying illustrations, is supported on brackets immediately above the engine.

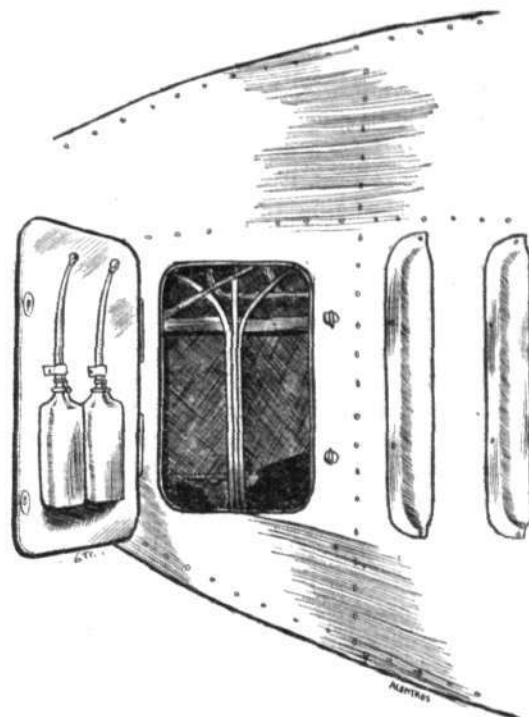
The pilot's and passenger's seats are arranged tandem fashion inside the roomiest portion of the *fuselage*, the pilot occupying the rear seat. Between the passenger's seat and the engine are the petrol and oil tanks, which have a capacity sufficient for a flight of $4\frac{1}{2}$ hours' duration.

The seats are unusually comfortable, being well upholstered. A neat instrument board, carrying a variety of instruments, is situated in front of the pilot's seat, as shown in one of the sketches, whilst in front of the passenger or observer is a small folding table.



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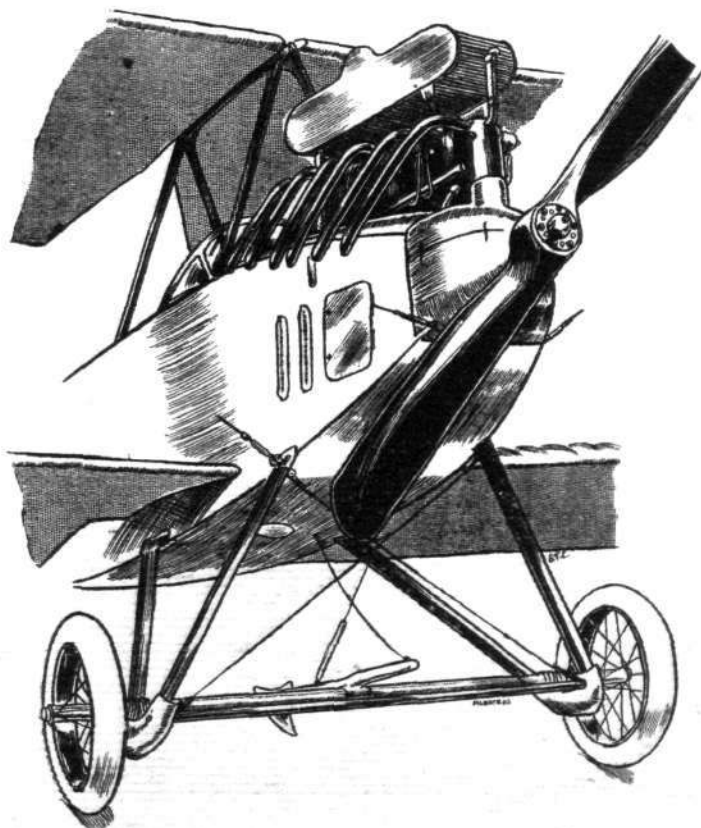
The tail skid of Albatros.



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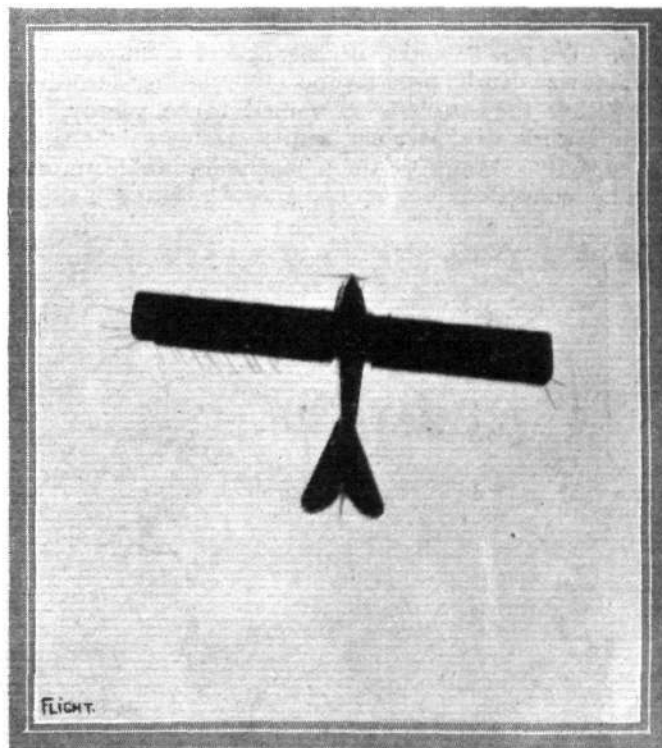
Oil and petrol cans mounted on engine inspection door of Albatros.

contact with the ground in a heavy landing and prevent them from being splashed with mud. Pivoted around the wheel axle, and operated by means of a cable from the pilot's seat, is a very effective brake, which pulls the machine up very quickly on landing; it may also be used to prevent the machine from going forward while the



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Chassis and engine of Albatros.



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View from below of the Albatros in flight.

pilot is testing his engine before a flight. By means of this brake and the hand-operated starter, the pilot is able to start the machine without any outside assistance, a very desirable feature in a machine for military purposes.

The main planes, as will be seen from the accompanying scale drawings, have the two main spars comparatively close together, the rear spar occurring about half way along the chord. The rear portion of the wing therefore possesses a considerable amount of flexibility, further increased by having the extreme rear part of the wing single surfaced for a distance of about a foot from the trailing edge. This, it will be seen, provides a form of progressive springing of the trailing edge, to which the machine no doubt owes a considerable amount of its lateral stability. *Ailerons* are fitted to both upper and lower planes, and the crank levers for operating these are not set at right angles to the planes, as it is usually done, but lie parallel to the planes and work in slots cut in the upper plane. From the end of these crank-levers cables pass round pulleys in the lower plane, and thence to the control wheel. The *ailerons* on the lower plane are set at a slightly negative angle of incidence, thus probably further enhancing the lateral stability.

Streamline steel tube struts connect the planes, and the attachment of these struts to the spars is highly original. A steel shell of the shape shown in the accompanying sketch rests on a paper fibre pad shaped to fit the curvature of the plane. Inside the shell is carried a steel ring, to which are anchored the cross-bracing cables, or, more correctly speaking, the turn-buckles for the cables. A bolt passes through the shell and the spar, and is locked on the other side of the plane by means of a nut.

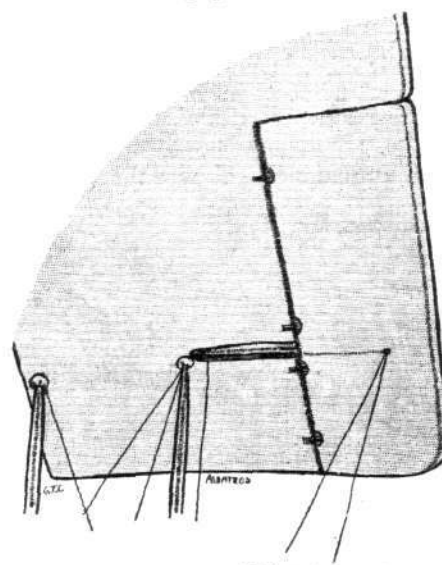
The wings are attached to the *fuselage* by vertical bolts, as shown in the sketch, whilst the upper planes are secured at the centre to a *cabane* consisting of four streamline steel tubes bolted to the upper *longerons* of the *fuselage*, and carrying at their upper extremities a horizontal tube which is provided with flanges for the attachment bolts. By undoing half a dozen bolts, the planes can be detached from the *fuselage*, and folded flat against one another without removing the inter-plane struts. We understand that three sets of main planes of different size can be used for the same *fuselage* according to whether the machine is wanted to be speedy, for scouting work, or slower but with a greater weight-carrying capacity. Some of these machines, we learn, can even be converted into monoplanes by fitting a single

pair of wings in the usual place. The *cabane* mentioned above then serves as a support for the upper bracing cables. Also the machine may be turned into a sea-plane by substituting floats for the wheels.

The tail planes are of the usual type, consisting of a fixed stabilizing plane, to the trailing edge of which is

hinged the divided elevator. A triangular vertical fin is mounted on top of the *fuselage* and secured to the stern-post, which also carries the rudder. A strong tail skid, sprung by rubber bands, protects the tail planes against contact with the ground.

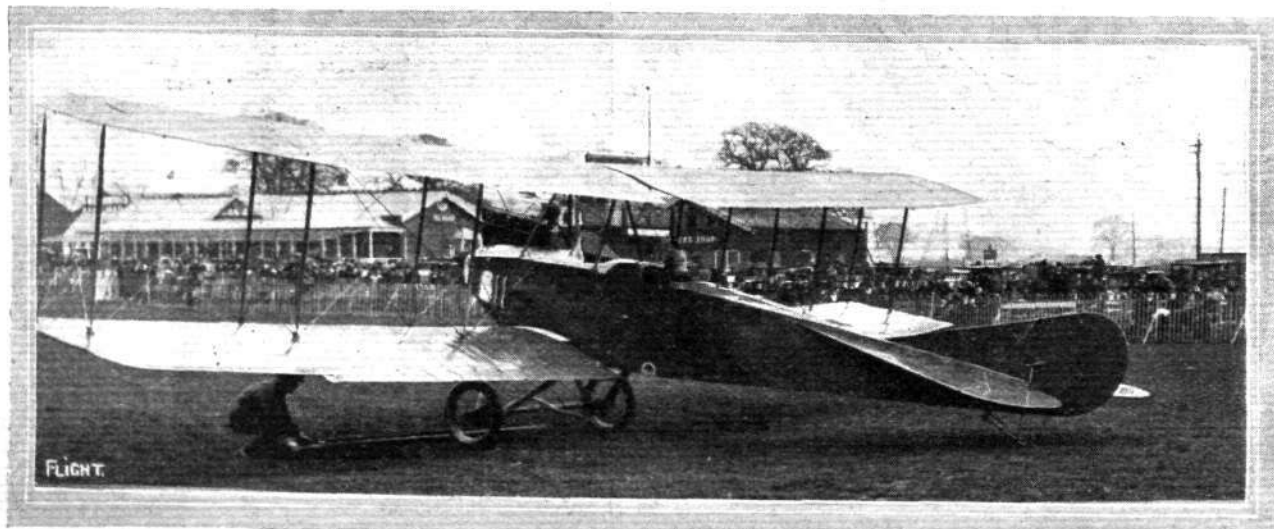
With the medium-sized wings fitted at present, the machine has a speed of about 70 m.p.h. and weighs about



"Flight" Copyright.
Aileron crank lever on Albatros.

1,500 lbs. empty. The workmanship and finish are excellent, and the behaviour of the machine in the air, as far as it was possible to judge from a flight with Herr Thelen, appears to be very good. When struck by gusts or running into *remous* the machine rose and sank on an even keel, the *ailerons* rarely being called into play. The climbing capabilities are extremely good for a machine of this size, and the speed range, without knowing the actual figures, seems to be considerable. With the engine throttled right down the machine glided very flat, but even when flying absolutely *cabré* we did not notice any tendency whatever to side-slip, nor did the pilot appear to experience any difficulty in getting her nose down again. On steeply banked turns, the bank being increased by using the *ailerons*, the considerable side area of the *fuselage* appeared to prevent side-slipping.

We understand that if the machine passes her tests, and there are reasonable prospects of repeat orders, it is the intention of the Albatros firm to establish a factory in this country.



THE ALBATROS BIPLANE.—Three-quarter rear view.

"Flight" Copyright.

ARMCHAIR REFLECTIONS.

By THE DREAMER.

CAME I but of the stock of Buzfuz, I, be-wigged and be-gowned, would conduct the case for the prosecution. Rely me, I would, not on such slender evidence as chops and tomato sauce, in however unsavoury condition I might, garnished by forensic eloquence, be able to serve it. Counselistic subtlety should not wheedle from Bardells of tender years damning, though ambiguous evidence in favour of my side.

Dobson and Fogg should never have undertaken a case "on spec" with more certainty of winning than I. Forcible, with all the vigour born of the certainty of conviction, would I quote Vics. and Caps.; respectfully would I refer his Lordship to Barber *v.* Penley, to the Pelican Club, to R. V. Moore. Hinde *v.* Evans should furnish me with precedent, and Article IV (2) of the Motor Cars Order should be my trump card, and clear for me a way whereby I would strike terror to the very souls of the transgressors.

I was not born to "Silk," yet shall some gentleman of the Inns take up the cudgels on behalf of suffering humanity, and remove all loitering cars and pedestrian deadheads from the roads round and about Hendon, and suchlike centres of gathering. Understanding comes slowly to me why a man who can afford to run a car for his own and his friends' pleasure, should yet find it necessary when wishing to witness the flying to do so from a distance, and from the public highway, in order to save the small fee charged for admission. Should they be asked their interest in aviation, they would, I venture, reply almost to a man that it was the sport of the thing.

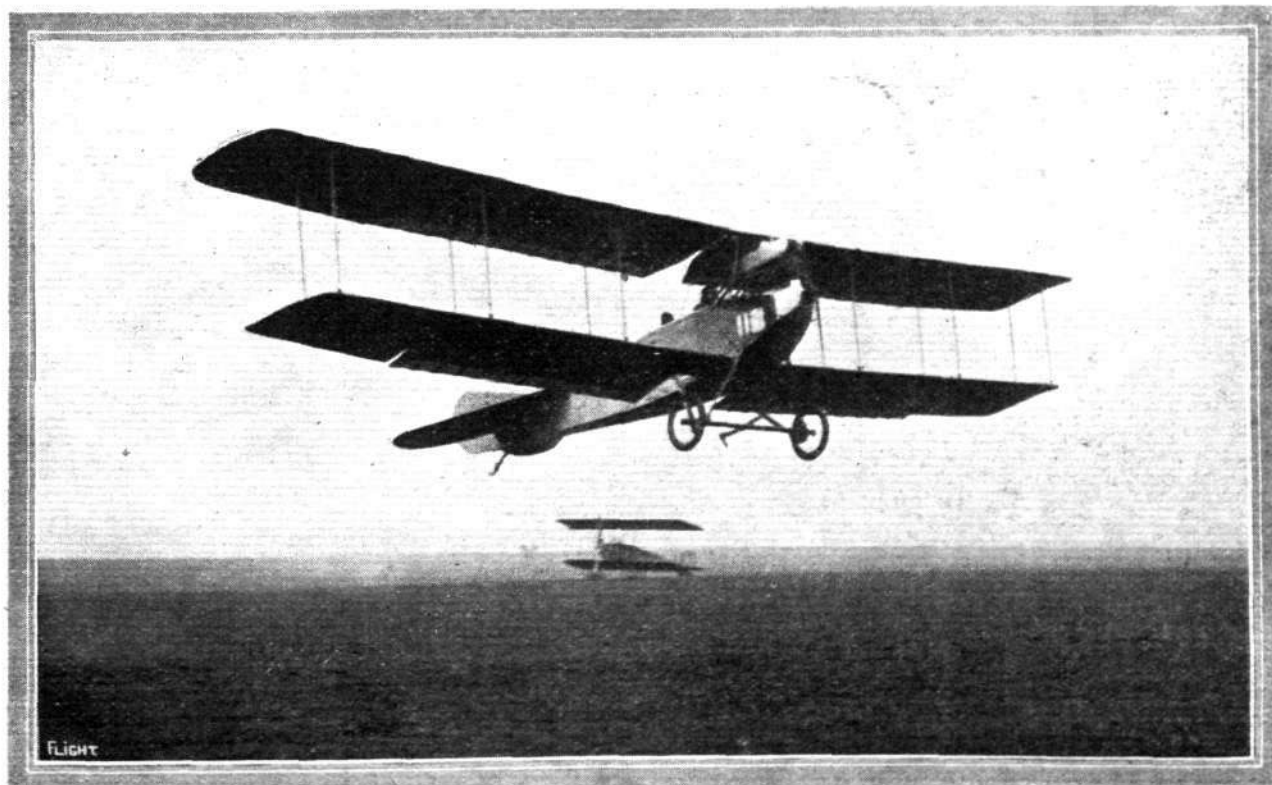
One who is interested in sport is generally proud to be thought a sportsman, because "Sportsman" carries with it an impression of genuine straightforward fairness, and the sportsmanship of the average Englishman is known throughout the world. Yet here we have men thinking themselves sportsmen, who, knowing, as they must know,

the enormous expense attached to the running of such places as aerodromes, are mean enough to take advantage of the fact that it is impossible to build the aerodrome fence right up to the sky; to stay outside and place themselves on an equal footing with the small boy who crawls under the circus tent, and sees the show for nothing.

Yes! understanding comes slowly to me, but it is not with the nature of mankind that I have to deal; it is with that organisation which Mr. Samuel Weller was pleased to designate "A hass," but which appears likely to bray shortly, in a key which shall be heard a long way.

Hendon, by reason of the great and continuous amount of flying that takes place there is a great sufferer, but they are by no means alone. Throughout the entire country, wherever there is an established aerodrome or where temporary aerodromes are used for the purpose of exhibition flying, whether it be week-end meetings or as an addition to other shows such as flower-shows or agricultural exhibitions, comes the same complaint, that many members of the general public stay outside the gates and see all or nearly all that there is to be seen free of charge.

The general public seem to have an idea that on the King's highway they can stand, and leave their cars to their heart's content, but a little thought on the subject will show that they are amenable to law. A highway primarily exists for the use of those wishing to establish communication between distant places. The word "highway" embraces all three of the roads general in England—the carriage road, the footpath, and the bridle path; and the rights of the public consist only in the right to use these roads to pass and repass in their desire to proceed from one place to another. Stopping for a reasonable time to load or unload goods, or to take up or set down passengers, is a right, but they have no right whatever to congregate or stand about, forming units of



The Albatros in flight.

Flight " Copyright.

a crowd liable to bring discomfort or trouble to other users of the road.

Complaints have been made to the Press with special reference to the roads round about Hendon, which on some days are all but impassable to ordinary users of the road owing to the number of waiting cars.

The question arises, whether this practice can be stopped by law; it undoubtedly can! So far as Hendon is concerned, there is no question, as the roads come under the authority of the Hendon Urban District Council, and are also within the Metropolitan Police Area.

It has been proved, by many verdicts in our courts of law, that those responsible for the exhibition which causes the crowd to assemble are also responsible to the authorities, but in the case of Hendon, as the crowd generally assembles at a good distance from the actual scene, it is more than doubtful that any action could hold against them, and should the authorities or others choose to take action against the culprits, I am sure nobody would be more pleased than the London Aerodrome people themselves, for it must be annoying to them in the extreme.

So far as foot-passengers are concerned, it would seem that the only course for the police to adopt is to order them to move on, and then prosecute them for obstruction should they refuse to do so.

The only question seems to be whether what is done represents a reasonable usage of the road or not, and it is a well-established principle of our common law that persons are not entitled to use the highway as a vantage ground for sighting seeing.

The case of motor cars is different, for they not only come under the general law applicable to all carriages, but there is special legislation concerning them.

A driver of any carriage whatsoever is prohibited from leaving such a carriage on the highway so as to obstruct the passage thereof, and this holds good, notwithstanding that the carriage is not unattended, the whole question being whether the highway is obstructed, and it seems that in the case of Hendon, the distribution of carriages in groups along the carriage way does not leave sufficient room for the safe passage of other vehicles in both directions along the road.

It is an offence against both the Metropolitan Police Act and the Towns Police Clauses Act, to leave any carriage standing on a highway longer than is strictly necessary, and it is provided that a person shall not, when driving or in charge of a motor vehicle, allow the car to stand on a highway so as to cause any unnecessary obstruction. The police could order all cars stationed on the roads round Hendon to be removed, and could take proceedings against the persons in charge of them, and thus put an end to proceedings which are not creditable to our boasted sportsmanship.

These reflections and relations of matters of legal guidance are inspired and begotten from an article of much merit by one Charles Rudkin, which has, within the last two weeks gone by, appeared in the *Local Government Chronicle*, and the London Aerodrome, as well as all other places of similar gathering, have much for which to thank this advocate, should a result of his teaching be a mitigation of this mean evil.



Lieut. Spencer Grey flying the new Sopwith biplane at Hendon. From an original drawing by Roderic Hill.

FROM THE BRITISH FLYING GROUNDS.

Royal Aero Club Eastchurch Flying Grounds.

MONDAY last week was good flying day, Henry Farman, Caudron, 3 Shorts, 100 Avro, Sopwith and 80 Le Rhone-Blériot at work. (S.B.)

Tuesday, showery towards evening. Caudron, Henry Farman, 3 Shorts out.

Wednesday, Henry Farman, Maurice Farman, 70 Reno, 80 Short gun machine, and three other Shorts (250 h.p. and 180 h.p.). 80 Sopwith, No. 149, sociable from Hendon, Lieut. Spencer Grey, Pilot, and Eng.-Lieut. Aldwell, passenger. On starting back for Hendon in the afternoon they had rather a bad accident just outside



Mr. A. E. Barrs, who has just passed for his certificate at the Grahame-White School, Hendon.

the aerodrome. The machine seemed to drop sudden'y, striking the ground, and carrying away the landing gear and buckling the planes and back. Lieut. Spencer Grey was found to be suffering from severe shock and injuries to his shoulders and back, and Lieut. Aldwell from injuries to his face and thigh. They were removed to the Royal Naval Hospital, Chatham, and are reported to be progressing favourably. A few minutes after the above occurred, Lieut. Ireland, with passenger, made a hurried descent on a Maurice Farman (owing to engine trouble) in a garden in Eastchurch Village, carrying away the telephone wires. Luckily he escaped without injury, the passenger, an E.R.A., also escaped unhurt. Thursday windy, new Bristol tractor was out, and successfully passed the test.

Friday fine, 80 Sopwith, 50 B.E., Bristol tractor, Avros and 3 Shorts.

Saturday, fine, 80 Deperdussin monoplane, 80 Sopwith, Caudron, 3 Shorts and Bristol tractor. Sunday, very windy morning, calm evening.

Civilian Flying.—Tuesday Hon. M. Egerton on 50 Short biplane, one flight. Thursday, Hon. M. Egerton two flights. Friday, Hon. M. Egerton three flights. Saturday, Hon. M. Egerton, three flights, Prof. Huntington one flight. Sunday, Hon. M. Egerton one flight.

Brooklands Aerodrome.

MONDAY last week, owing to wind, up to over 30 m.p.h., and rain, there was no school work done. Mr. Lan-Davies was out on his 50 h.p. Avro biplane, and Mr. Waterfall started for Farnborough on the new Martinsyde monoplane, but had to return owing to rain.

Before breakfast Tuesday, the conditions were well nigh perfect for flying, and both Vickers and Bristol Schools were in full swing. Mr. Barnwell flew to Staines and back at 3,000 ft. on the 50 h.p. Vickers-Blériot, Mr. Elsdon afterwards making a flight on the same machine. Mr. Lan-Davies passed his *brevet* test on his Avro biplane in good style, the first landing being on the mark, the second 50 ft. from it, and an altitude of 400 ft. being reached in the altitude test, a good *vol plané* descent being made from that height. Herr Roempler took up Lieut. Collett, R.N., to officially test the new D.F.W. all-steel biplane ordered by the Admiralty, the machine

passing its tests well. Mr. Barnwell was out on the 70 h.p. Vickers biplane. The wind varied between zero and 24 m.p.h.

On Wednesday Lieut. Mansergh on a Vickers biplane passed his *brevet* tests, rising to 500 ft. in the altitude one. Lieut. Collett, R.N., took up the new D.F.W. biplane for a flight by himself, and gave a fine exhibition with good banked turns and spiral landing, the machine answering its controls in a wonderful manner. Mr. Waterfall was out on the new Martinsyde monoplane. In the afternoon Mr. Barnwell was testing the Vickers gun-carrying biplane, and Mr. Raynham the 100 A.B.C. engined Avro biplane. The wind was about the same as the previous day.

Mr. Merriam made a good flight on Thursday on the Bristol biplane and Mr. Waterfall one on the new Martinsyde monoplane. In the afternoon Mr. Barnwell was out on the Vickers gun 'bus, and Mr. Merriam on the Bristol biplane with and without pupils. The Vickers pupils were also at work. Lieut. Collett, R.N., was again flying well on the D.F.W. biplane. Mr. Alcock made several trips on the Maurice Farman biplane. The wind was blowing up to 25 m.p.h.

On Friday both the Bristol and Vickers Schools were busy. Mr. Alcock went to Staines and back at 4,000 ft. In the afternoon Mr. Barnwell flew to Farnborough on the Vickers gun 'bus. Mr. Merriam made several flights on the Bristol biplane. Mr. Waterfall was out on the new Martinsyde monoplane. The Bristol and Vickers pupils were again busy. Mr. Elsdon was on the 50 h.p. Vickers-Blériot monoplane, on which Mr. Hinshelwood, one of the Vickers pupils had his first trip, showing considerable aptitude in handling the machine. The wind varied between zero and 15 m.p.h.

Mr. Barnwell was testing the new Vickers gun-carrying biplane on Saturday afternoon which flew extremely well. Mr. Lan-Davies made a number of flights on his 50 h.p. Avro biplane. Mr. Merriam was out several times on the Bristol biplane, as was Mr. Alcock on the Maurice Farman biplane, on which he flew across country. Mr. Mahl was taxiing on the Sopwith biplane.

On Sunday, notwithstanding the weather, a fair number of spectators put in an appearance. Mr. Waterfall made a fine flight on the new Martinsyde monoplane. Mr. Alcock was out several times on the Maurice Farman biplane. Mr. Barnwell was further testing



Mr. W. J. Stutt, another Australian pilot who has taken his certificate at the Bristol School, Salisbury Plain.

the new Vickers gun-carrying biplane. And Mr. Merriam made one or two good trips on the Bristol biplane, on which he took up the winner of the ballot for the free passenger flight—Mr. E. Elms of Chertsey Road, Byfleet, who has now won four times!

Bristol School.—Monday, last week, Merriam for test, then with Sergeant Deane as passenger, this pupil then making several straights. Mr. Racine Jacques followed with a short solo, but the rising wind stopped tuition for the rest of the day.

Merriam with Sergeant Deane on landing practice, Tuesday, Deane afterwards doing some solo flying, as also did Mr. Racine Jacques. Too windy for further tuition.

Wednesday, high flight by Merriam for test; Sergeant Deane on solos, making excellent landings. Merriam for another test in the afternoon, but weather too bad for pupils.

Several tests by Merriam, Thursday, but weather unsuitable for tuition.

Sergeant Deane made his first circuits and landings, Friday, afterwards going up 500 ft. and landing with engine off. Merriam with Mr. Racine Jacques to over 2,000 ft. for cross-country flight, this pupil then following with three solos. Sergeant Deane flying figures of eight and practising landings.



Mr. J. E. B. Thornely, the very able seventeen-year-old pilot who last week looped the loop at Eastbourne.

Saturday, too windy for solo flying by pupils.

Vickers School.—Monday, last week, Barnwell, Knight, and Elsdon on biplanes with Capt. Phillips. Comte FitzJames, and Lieut. Acland. Lieut. Mansergh solo.

Tuesday, Barnwell, Knight, and Elsdon on biplanes with Capt. Phillips, Lieut. Acland, Lieut. Mansergh, Comte FitzJames, and Mr. Wilberforce; Comte FitzJames and Mr. Wilberforce solos. Barnwell and Elsdon on Blériot mono.

Wednesday, in morning, Lieut. Mansergh solo on biplane (figures of 8) then for *brevet*, getting through in excellent style. Knight and Elsdon with Capt. Phillips, Comte FitzJames and Lieut. Acland, two last named for solos also.

Thursday, in afternoon, Barnwell, Knight, and Elsdon on biplanes with Lieuts. Leighton and Underhill (new pupil), and Comte FitzJames. Messrs. Hurst and Wilberforce and Comte FitzJames solos.

Friday, Barnwell, Knight and Elsdon on biplanes with Comte FitzJames, Lieut. Underhill and Mr. Wilberforce. Comte FitzJames and Mr. Wilberforce solos. Knight and Elsdon with Lieut. Leighton. Elsdon, Knight and Mr. Hinshelwood on Blériot mono.

Sunbeam Activities.—Mr. Jack Alcock on Thursday last week, made one flight with passenger on 100 h.p. Sunbeam-engined M. Farman across country to Windsor for over an hour at 3,000 ft.

Friday morning, one hour's flight with passenger in aerodrome, later across country for 40 mins. with Mr. Brewster at 4,000 ft. Afternoon, cross-country flight round Staines and Hampton Court with Miss C. Pullin as passenger at 4,000 ft.; also 20 mins. flight in aerodrome with Mr. Brewster. Fine cross-country flight, Saturday, with Mr. W. Douglas round Hurst Park, Staines, and Woking at 3,000 ft.; also passenger carrying all the afternoon.

Sunday one flight in the rain with passenger at 2,000 ft. Also Mr. Raynham made a flight in the rain; was very pleased with the engine.

London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—Mr. Robinson rolling with Instructor

Howarth, Monday last week, and afterwards alone. Messrs. Norris, Lillywhite, and Bjorkland circuits, &c., alone. Mr. Smiles rolling with Instructor Strange, afterwards flying straights with Instructor Howarth. Lieut. Lindopp solo circuits, figures of 8, &c.; Prince Sapieha straights and circuits, with Instructor Howarth in passenger seat; Mr. Edridge Green circuits, figures of 8, &c., afterwards going in for and gaining his pilot's certificate.

Tuesday, Messrs. Bjorkland, Grahame and Lieut. Lindopp solo circuits, &c.; Mr. Lowe circuits with Instructor Howarth. Later, Mr. Grahame and Lieut. Lindopp going in for their *brevet* tests, and each gaining his pilot aviator's certificate, Lieut. Lindopp making especially good landings.

Mr. Robinson rolling alone, Wednesday; Messrs. Kershaw, Lowe, Parker, and Prince Sapieha straights, with Instructor Howarth in passenger seat; Mr. Smiles straights with Mr. Strange; Mr. Bjorkland circuits, &c.

Friday, Mr. Parker straights with Instructor Strange, afterwards doing solo straights. Messrs. Smiles, Kershaw, Robinson, and Moore straights with Instructors Strange, Howarth, and Lillywhite; Mr. Norris circuits, &c.

Mr. Weber solo straights, Saturday, on Blériot; Major Piercy straights with Instructor Strange; Messrs. Clarke, Kershaw, and Dunn solo circuits, &c., Mr. Norris solo straights.

W. H. Ewen School.—On Monday, last week, the school was out at 6.30 a.m. After test flight by Mr. F. W. Goodden, Mr. Bankes-Price did circuits, and Mr. Curtiss straights.

At 8.45 a.m. on Tuesday, Mr. Goodden was out with pupils. Mr. Bankes-Price did circuits, and Mr. Curtis half circuits on *brevet* machine. On 35 h.p. Caudron No. 1 Mr. Garvin straights, and Mr. Verney straights.

On Thursday afternoon, Mr. F. W. Goodden made a splendid exhibition flight and looped the loop four times on the 45 h.p. Caudron biplane.

Hall School.—Monday, last week, L. E. Palmer one straight flight at 30 ft. followed by a good circuit at 100 ft. A. L. Brookes three half circuits at 30 ft. Virgilio three straights at 20 ft. A. F. Arcier three straights at 40 ft. Miss d'Elsa three straights. Owing to heavy mist practice was greatly hampered and made circuits and figure eights almost impracticable. In evening H. C. G. Allen out on his 35 h.p. Blériot, doing numerous straights.



2nd Lieut. J. Lee Jackson, who has recently taken his Royal Aero Club *brevet* at the Vickers Flying School, Brooklands.

Several pupils put in an appearance Tuesday, at 6 a.m. Messrs. Palmer and Brookes excellent figure eights at good altitude. Arcier and Gearing half circuits. Virgilio straights at 20 ft. J. H. Rose showing aptitude in rolling. J. L. Hall out on Avro. H. C. G. Allen straights on his Anzani-Blériot.

Wednesday, E. Palmer good circuits at 100 ft. Brooks unfortunately, on completing a figure eight after an excellent circuit, seemed to lose control, and made a forced landing, putting No. 2 Caudron out of practice for some time. H. C. G. Allen made six well judged straights on Blériot, afterwards going for passenger ride

with Hall on Avro. Later J. L. Hall took out Mr. Alastair Miller's Deperdussin monoplane and made a short flight.

Thursday J. L. Hall successfully looped the loop on Avro at 2,000 ft., and on Friday he was flying Mr. Allen's Blériot and adjusting machine.

Saturday, J. L. Hall exhibition and passenger carrying, amongst passengers being Sir Francis Popham, N. Bosanquet, and L. Aines.

Salisbury Plain.

Bristol School.—Voigt and Stutt made passenger flights, Monday last week, with Lieut. Bonham-Carter (4 flights), Lieut. Bolitho, Lieut. George (2), Mr. Hay (2), Mr. Chambers (3), Lieut. Myburgh, solo flights being made by Lieut. Harman (2), Lieut. George (2), Lieut. Bolitho (3), Lieut. Barratt (3) and Capt. Fell (3).

Tuesday, after testing, with Lieut. Bonham-Carter as passenger tuition was given to Mr. Hay, Mr. Chambers, Lieut. Myburgh, Lieut. Rabagliati and Capt. Walcot. Lieut. Harman and Capt. Fell were out solo flying, but wind and rain prevented further tuition.

Passenger tuition was given Wednesday to Mr. Hay, Mr. Chambers, Lieut. Rabagliati, Lieut. Bonham-Carter, Lieut. Myburgh and Capt. Walcot. Capt. Fell, Lieut. Barratt, Lieut. Bolitho, Lieut. George and Lieut. Harman all made solo flights.

Thursday, Voigt with Lieut. Bonham-Carter (2), Capt. Walcot, and Mr. Hay as passengers. Lieut. Barratt made a solo and then flew for his certificate, which he obtained in splendid style. Capt. Fell also made a solo flight and passed part of the tests for his *brevet*. Voigt finished the day's work by giving tuition to Capt. Walcot, Lieut. Myburgh, Lieut. Bolitho, and Mr. Chambers.

Friday, passenger tuition by Voigt to Capt. Walcot (3 flights), Lieut. Bolitho (5), Lieut. Bonham-Carter (2), Lieut. Harman (3), Lieut. Myburgh (4), Mr. Chambers (3), Mr. Hay (2), Air-Mechanic Locker (1). Capt. Fell went out for a solo and then completed the tests for his certificate excellently.

Voigt made a test, Saturday, and then gave tuition to Lieut. Bonham-Carter (4 flights), Mr. Chambers (3) and Mr. Hay (3), but further tuition was prevented owing to wind and rain.

Shoreham Aerodrome.

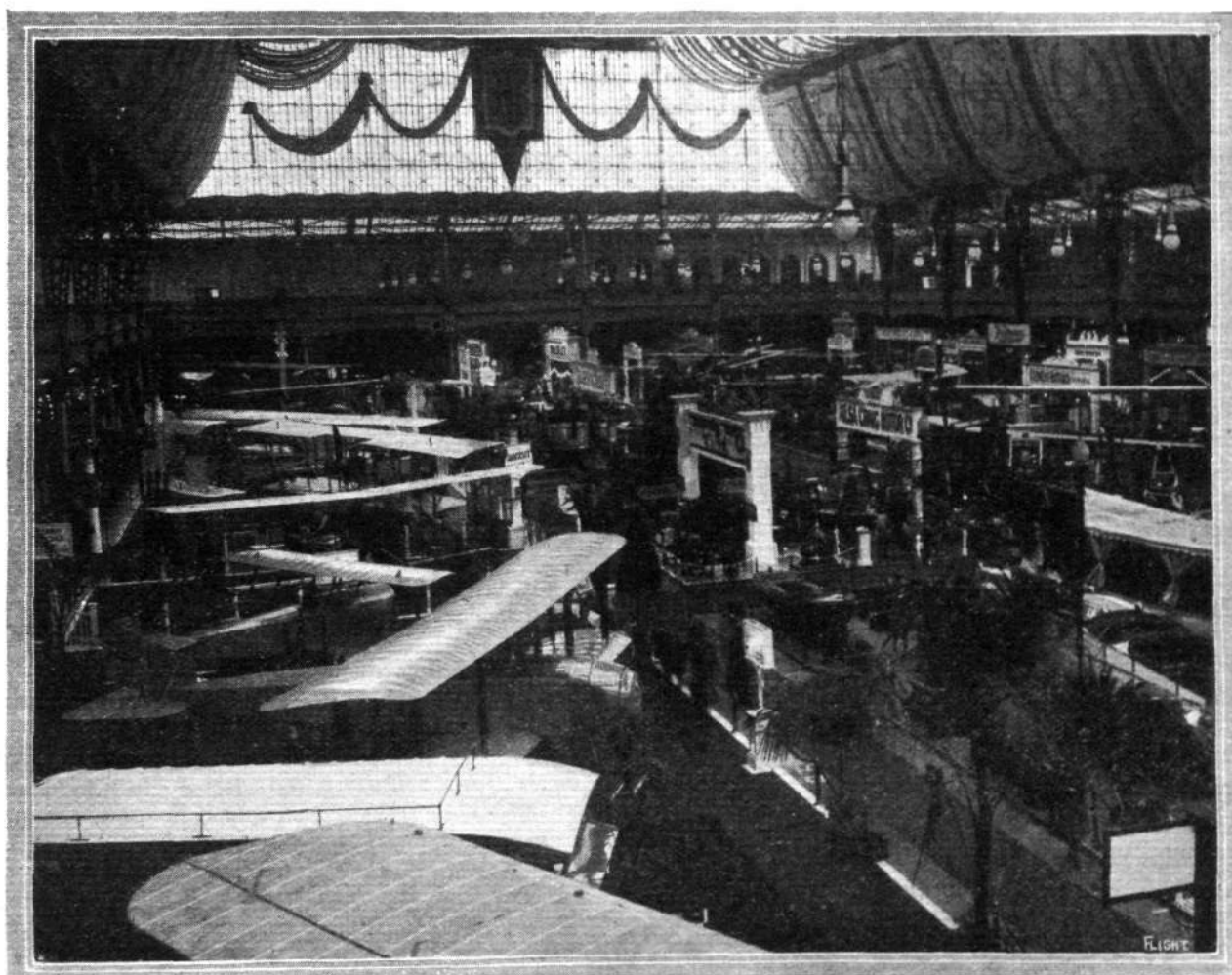
Pashley School.—Monday and Tuesday very windy, but advantage was taken of an improvement in the weather on Wednesday

and Messrs. Mortimer, Gray, Hale and Willett were taken for flights behind the instructor. Similar work was done on Thursday and Friday; Messrs. Hale and Gray were also doing solo straights.



Capt. A. Ross Hume, who last month obtained his *brevet* on a Vickers biplane at the Vickers Flying School, Brooklands.

On Sunday a visitor to the school, Mrs. Maas, was taken for a passenger flight although it rained hard all the time the machine was in the air.



A general view of the recent Olympia Show as seen from the west end of the building.

"Flight" Copyright.

EDDIES.

You saw the little paper gliders at Olympia, of course ! I mean the Cillon loop-loopers. You were no doubt one of the number to the amount of over a thousand who bought one for three-pence, and so added your mite to the Desoutter fund. They were good value, were they not? They were beautifully made, and they looped the loop in true Hucks style, and you would have bought one for the price wherever you might have seen them, and consider you had your money's worth, apart from any help given to a deserving cause—so would most people. Here is a letter received by friend Barr:—

"Dear Sir,—For the enclosed piece of paper I was charged 3d. at the Olympia Exhibition by the persons in charge of your stall. If you are aware of the fact, well and good, but if not, I don't think it right the public ought to be done. I may mention I was not the only one who had to pay it.

"Yours sincerely."

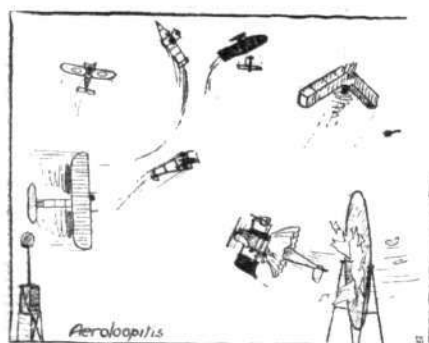
Nearly £10 was added to the Desoutter fund by the sale of these little gliders, so, as the correspondent observes, he was not the only one who paid, thank goodness!

x x x

Progress in aviation is reported from New Zealand, in a letter just to hand from J. W. H. Scotland who came to this country last May to learn flying, and was Mr. J. L. Hall's first pupil when he started his school at Hendon. He is now engaged by the New Zealand Aviation Co., Ltd., just formed to give flying exhibitions in that country. By the same post, strange to say, came a letter from J. J. Hammond, also from New Zealand, these two being the only two flyers at present there. Mr. Hammond is flying the Government I.C.S. Blériot and Mr. Scotland his own 45 h.p. Caudron, purchased from Mr. Ewen, and which he says is going fine. We are always sorry when pilots leave this country and go abroad, but with a company formed to give exhibitions, and only two pilots in the colony, there should be a good opening for skilled flyers.

x x x

To loop or not to loop, it seems, is no longer a question—all pilots will loop. The microbe responsible for "aero-loopitis" must have been about in full force at Hendon last week, when no less than five usually sedate pilots went rolling about in the air on one afternoon, and all for the first time. Carr set the ball rolling, and the fever



soon spread to Noel, Strange, Goodden and Hall, who one after the other went up and made their initial loops. On Saturday they were at it again, sometimes two or three at a time, in fact the air seemed full of machines turning

over, so much so that one had a job to follow them in their evolutions. Looping now seems to have become part of the ordinary business of flying, and it is quite possible that before very long looping competitions will be seen, or perhaps on finishing a race every pilot will be required to loop on crossing the finishing line, as a sign that he has completed the course. They do it very

low down, too. Pegoud set the altitude of safety at some three thousand feet, but it is no unusual thing now for machines to be turned over at altitudes of only two or three hundred feet, and there is no longer any difficulty in seeing exactly what takes place.

x x x

A tube lift is not the usual place to interview celebrated pilots on their latest achievements, but the journalist is no respecter of places, so that he gets his copy. Consequently when Salmét stepped into the lift at Leicester Square with me this morning, I tackled him on his Paris-London trip straight away. He told me he had a good trip, but that after leaving Folkestone he was much bothered by the mist which, owing to the altitude at which he was flying, made it very hard to follow his route. The first place he really recognised with any degree of certainty was the Staines reservoirs, and then he had been flying about so long that he had run short of petrol, and had to come down to replenish. The amount of flood water all over the country also bothered him a good deal when looking for the Welsh Harp, and even when he had located it, he could not find the aerodrome for some time. Asked if he was going to stay at Hendon, he told me that he was then off to Paris again to bring over the waterplane—asked if he wanted a passenger, he treated me to one of the Salmét smiles, and disappeared Charing Cross way.

x x x

It reads quite like a film plot—that of a detective chasing in a waterplane a steamer that had left port with a wanted man on board, yet this is exactly what took place recently in America. A negro boy, it appears, had stolen a valuable diamond brooch from the hotel where he was employed, and was en route for Bermuda when the detective heard of the theft and the flight of the offender, and by wireless the captain of the steamer was made aware of what was happening, and the hydro overtook him twenty miles at sea, when the steamer lay too whilst the detective went on board and secured his prisoner, who was then strapped in the machine and treated to a flight back to land to be dealt with by law. Truly, what with wireless and aeroplanes, the lot of the transgressor is hard, and a free flight is but poor compensation.



x x x

"The Mahdi is dead—It is not so difficult to get to Khartum as it once was"—and "if Mr. McClean is coming to England in his aeroplane, he will probably never get here at all." These mighty words of wisdom from Mr. Justice Darling in a case of *Hare v. McClean*. That the Mahdi is dead and that it is not so difficult to get to Khartum as it once was, is news of about equal importance. The gibe at the prospect of an aeroplane never reaching this country from Egypt, shows the inroads that a knowledge of aviation has made on the judicial understanding—or is it simply one of the supposedly huge jokes which emanate from the bench on occasion?

"WILL O' THE WISP."

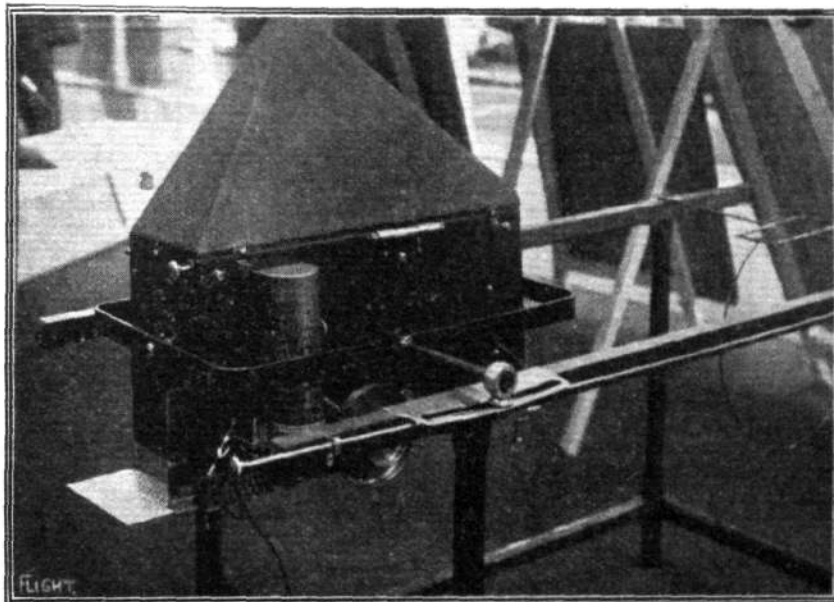
A BOMB-SIGHTING DEVICE.

ON the stand of the Aircraft Manufacturing Co. at Olympia, an extremely ingenious device was exhibited, the Coursin Bomb Sighting apparatus. Its greatest claim upon our attention does not rest upon its ingenuity, but upon the simplicity with which it can be employed, as the observer, after setting the mechanism for the height at which the aircraft may be above the ground and adjusting it for the speed relative to the earth, has only to wait until the object aimed at is in line with a pointer within the box and then to drop the bomb over the side of the nacelle or fuselage.

The general appearance of the apparatus is shown in the accompanying photograph; and will be seen to consist of a box, within which the controlling mechanism is placed, surmounted by a pyramidal shaped cover. On the outside of the box is a casing containing a small electric motor which is driven by current from an accumulator. This motor drives a vertical shaft within the box by means of gearing. To the right of the casing is seen a circular wheel having two diameters, which is connected by mechanism to a rubber-covered wheel mounted upon the vertical shaft driven by the motor so that the rotation of the hand-wheel causes the rubber-covered wheel to move radially over a circular disc, mounted on a horizontal axis, against which it presses. The larger diameter of the hand wheel is graduated to a suitable scale for the adjustment of the mechanism for height above the ground, hence, as the aeroplane rises, the observer sets the wheel to the corresponding height, and in so doing moves the rubber-covered wheel within the box nearer to the centre of the circular disc. The latter is connected to another and similar disc on the opposite side of the box against which a second rubber-covered wheel is pressed. This rubber-covered wheel drives a small drum, around which an endless thread, knotted at regular intervals, is wound, the thread being taken to the extreme ends of the box and, passing over fair-leads, is taken along the centre line near the upper edge of the box. The location of the second rubber-covered wheel on its disc is determined by mechanism operated by the small knob seen at the end of the box, as well as by the height-adjusting gear, which is inter-connected with it, and a steel band, carrying a pointer, is connected therewith, so that when the knob is rotated, the rubber wheel is caused to move radially inwards or outwards, and the pointer carried by the steel band to move along the length of the box.

We therefore see that the endless thread is caused to move by the electric motor, its speed being determined by the radial position of the two rubber-covered wheels on their respective discs.

In the bottom of the box is a slide, carrying a lens which projects an image of the ground over which the aeroplane is passing upon a ground glass screen in the bottom of the tapered cover. Thus an observer looking through the eyepiece at the top sees a projected view of the country beneath upon which is also shown the shadow cast by the endless thread down the centre of the box and the pointer carried by the steel band. The position of the lens is varied by the rotation of the handwheel used for making the adjustment for height.



"Flight" Copyright.

View of the Coursin bomb-dropping apparatus from the motor side, showing adjusting handles.

of inclination of the machine with the direction of flight. This apparatus was used in the Michelin bomb-dropping competition, when the first and second prizes were won on Maurice Farman aeroplanes.

The bomb exhibited on this stand also calls for notice. It is torpedo shaped and provided with fins near the tail, so that as it passes through the air the bomb is caused to rotate. This rotation is necessary first of all for directive purposes, and secondly to render the bomb "live." In the nose of the shell there is a safety fuze, the detonator cap being incapable of moving forward against the striker until the spring-locking gear is disengaged by the action of centrifugal force. As the bomb falls through the air, these locking springs are thrown radially outwards, and on striking the ground the detonator cap is impelled upon the striker, thus firing the bomb.

sheltering and at the same time damaging the monoplane. However, the damages are now being put right and the aeroplane should be quite ready for the tests again in a fortnight's time. During this week-end Messrs. Trykle and Baker have completed their propeller which Mr. Prosser will be trying and testing on his Caudron biplane. On several occasions Mr. Prosser has started out alone from the club aerodrome. Taking the shutters of the hangar down, wheeling out the aeroplane, starting the engine and starting off have all been accomplished without a single person near at hand. The Anzani engine has now been running very beautifully, it being possible to throttle it down to less than 200 r.p.m., the propeller almost being seen as it is rotating.

AERONAUTICAL SOCIETY OF GREAT BRITAIN.

Official Notices.

1. **Election.**—Member: A. Klemm Schmidt.
2. **Meeting.**—The eleventh meeting of the present session will be held on Wednesday, April 15th, at 8.30 p.m., when Brigadier-General D. Henderson, C.B., D.S.O., will preside. Mr. Griffith Brewer, A.F.Ae.S., and Lieut. J. N. Fletcher, R.E., will read a paper, to be followed by a discussion, on "The Value of Ballooning as a Training for Flying."

Tickets for visitors, not introduced, may be obtained from the Secretary, 11, Adam Street, Adelphi, W.C.

B. G. COOPER, Secretary.

BIRMINGHAM AERO CLUB

THE past month has been rather quiet partly owing to the bad weather, and Messrs. Löwy and Swingler have again experienced bad luck with their monoplane. First the engine shaft screwed out of the flywheel whilst the engine was being tested and a week later a wind damaged the tent in which the machine was

PUBLICATIONS RECEIVED.

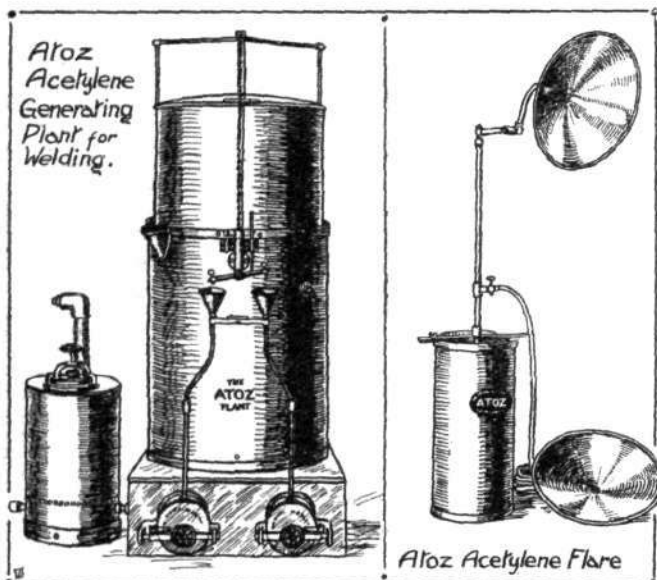
The Brooklands Year-Book, 1914. The Brooklands Automobile Racing Club, Carlton House, Regent Street, S.W.

"The Age of Risks." Burroughs, Wellcome and Co., London, E.C.

Animal Flight: a Record of Observation. By Dr. E. H. Hankin. London: Iliffe and Sons, Ltd. Price 12s. 6d.

ACETYLENE AND AVIATION.

STEEL is being more and more extensively used in the construction of the aircraft of to-day, largely owing to the possibilities opened up by welding. Not so long ago, welding was essentially a skilled art, and most of the jobs of this kind had to be done "out." To-day, however, there is hardly a large factory where welding obtains that has not its own welding plant, and workers who thoroughly know their work. In aeroplane construction there are innumerable cases in which welding can be utilised, such as for the tubular work in the



fuselage, chassis, and planes, in addition to struts, sockets, &c. For such work, perhaps, the most successful form of welding is the Oxy-Acetylene system, in which the intense heat of acetylene gas in conjunction with oxygen is utilised to produce a concentrated and extremely hot flame that is easily controlled.

Acetylene generates over 1,500 B.T.U. of heat per cubic foot, and with the Oxy-Acetylene system about one volume of acetylene to $1\frac{1}{2}$ volumes of oxygen are used, producing a flame having a

temperature of about 6,000° F. The localisation of this intense and concentrated heat enables a weld to be done quickly and efficiently without burning the metal by oxidation or causing other injurious effects, whilst very little practice is required to make the workman proficient in the manipulation of the blow-pipe.

Messrs. The Acetylene Corporation, Ltd., of 49, Victoria Street, London, W., who have had many years' experience of acetylene and its uses, have designed several acetylene generators for use with welding plants, of which there are many in use in various large works, including some aeroplane factories. Two of these generators are the "Atoz" stationary plant, which has two generating chambers, and the "Atoz" portable plant. The latter can easily be moved about from place to place, the weight being only 112 lbs., and it will be found invaluable for general work on metal up to $\frac{1}{2}$ in. thick. The former model is shown in the accompanying sketch. They are made of mild steel and galvanized after construction. These and the other models are extremely simple to handle, and are quite automatic in action. The gas is slowly generated and stored in a gas bell, whilst a large volume of water surrounding the generating chambers prevents overheating.

An efficient system of purification is employed whereby a cool, thoroughly washed and purified supply of acetylene gas is produced. This is of the utmost importance, as it is essential that the acetylene employed for welding purposes should be absolutely pure. A complete welding outfit consists of the acetylene generator and the necessary calcium carbide, one or more blow pipes, oxygen pressure regulator, hydraulic back pressure valve, flexible tubing, specially tinted spectacles for the protection of the operator's eyes, and, of course, the oxygen, all of which can be supplied by the Acetylene Corporation, Ltd. In addition to welding outfits, the above firm also supply various other specialities in connection with acetylene, one of which, being applicable in many ways to aviation, is the "Atoz" acetylene flare, also shown in the accompanying sketch. The uses to which these flares can be put are numerous, for in addition to supplying illumination in large hangars—for they are quite safe—they can be used out in the open for marking out aerodromes during night flying, or would greatly facilitate repairs being carried out to an aeroplane at night when a forced descent has been made away from the aerodrome. The light given is very powerful and steady, and ordinary commercial carbide is used. Other flares similar to the one just described, but much smaller so that they can be carried about in the hand, are also made, which should be equally useful in connection with night flying.

"LESSONS ACCIDENTS HAVE TAUGHT."

(Continued from page 318.)

THE DISCUSSION.

In opening the discussion Mr. Mervyn O'Gorman remarked that he wished the public were made fully aware of the fact that the Accidents Investigation Committee required funds in order to carry on their work effectively. The object of the Committee was to secure safety; and in the exercise of their functions they had—(a) to interrogate witnesses in order to ascertain the facts concerning an accident as accurately as possible; (b) to express an opinion as to the probable cause of the accident, and (c) to formulate a statement giving their recommendations based on that opinion. This, he said, necessarily involved considerable expense, and it would be a great advantage to the Committee if they had sufficient money at their disposal as would allow them to maintain a trained staff to make and check calculations, pay for tests and experiments, and possess an independent expert to study and analyse these accidents. The Committee did not condemn flyers or constructors, but indicated weaknesses, errors and risks. He suggested that "wear and tear" might be included amongst the causes of accidents cited in the paper, as this was much greater than was generally supposed. He agreed with the author's remarks concerning the possibility of a pilot slipping forward on to his controls when diving steeply, thus causing the aircraft to dive still more; but thought it was probable that with the large machines which might come into existence in the near future, a servomotor would be used for operating the controls, in which event no harm would be likely to result. On the subject of hazardous flying, he said that very few pilots took the precaution to look round their machine before starting. Many did not insist on a new part, but permitted the re-adjustment, straightening, or patching up of an old part. As regards gusts and their effect upon the safety of the machine, Mr. O'Gorman observed that in his opinion there was no warranty—in view of the knowledge they now possessed—for assuming that they were the actual cause of accidents, although they might be regarded as primarily responsible, and it was due to other factors that their effects were not corrected in time. He drew attention to the danger involved

when pilots allowed their machines to attain extremely high speed before flattening out. No aeroplane, he said, should be permitted to dive at a greater speed than, say, 20 per cent. about the normal speed attained in horizontal flight, which figure was suggested as a basis for discussion, and he gave the following illustration as indicating the magnitude of the stresses induced in the various parts at excessive velocities. Supposing, from some cause, the loss of the sense of location, for example, that a pilot allowed his machine to dive for 10 seconds. In that time, it was possible for the speed to rise to as much as twice the normal speed, then assuming that the stresses varied as the square of the velocity, the stress induced by this increased velocity would be four times the normal. In flattening out, the machine would pass through all angles of lift, including that of maximum lift, at which point the loading might be three times the normal. Hence it was possible for the stress actually induced when flattening out under these conditions, to be as much as twelve times the normal stress and the limitations imposed by weight considerations precluded any possibility of allowing the high factor of safety that would be required to render the machine capable of withstanding such high stresses. Mr. O'Gorman also referred to the importance of keeping the aneroid in good order, as in flying from one district to another which might be immersed in fog, there was only the aneroid to tell the pilot that he was at a sufficiently low level to beware of high objects on the ground. He said that the aspirations of flyers to describe a loop were growing in intensity and an unduly rapid dive might prove fatal. It would appear that successful exponents of this form of flying do not increase the speed of preliminary descent as much as was supposed, and the exchange of information on these subjects would be of value to all concerned in flight while the application of a recording tautness meter to the wires of a machine used for this purpose would be so instructive that he would be glad of the opportunity of obtaining readings if one of our skilful exponents of the art would permit of it.

Dr. Leakey observed that he believed the attitude of pilots towards the use of safety belts was to a large extent influenced by the school in which they had received their training, and he thought they should leave the matter in the hands of the pilots themselves as to whether they would use them or not. As regards preventive measures, the results of accidents could be greatly minimised by the adequate use of padding, and he had noted at the exhibition at Olympia that the hard framing on one machine could be distinctly felt beneath the padding, whilst in another the padding was quite four feet above the pilot's seat and in that position was of no service whatever. He considered that much could be done to mitigate suffering and damage in the event of serious injury to the pilot or passenger by controlling the action of the crowd that always assembled after an accident and prevent them from endeavouring to extricate the man from the wreckage—unless fire or other immediate danger to human life appeared imminent—until some person or persons skilled in handling injured persons arrived, as he knew of cases where much harm had been done thereby. He did not believe that a medical examination of so severe a character as that required for the Army and the Navy was necessary in the case of pilots.

Dr. Thurston considered that non-fatal as well as fatal accidents should be investigated by the Accidents Committee, because, from the fact that the principal actor in the accident was alive, so much more could be learned as to its cause. Any alteration in the existing direction of operation of controls, he thought, would be undesirable, because the present method necessitated a movement of

the lever in the direction indicated by nature. He mentioned that some years back he had developed a system in which it would be impossible to dive at a greater speed than 30 per cent. above the normal flying speed.

Mr. Griffith Brewer recalled an incident in the tour of Messrs. Ogilvie and McClean in Egypt, as illustrating the value of an air-speed indicator. On one occasion, when their engine was working badly, the only way in which they were able to proceed was by reducing their speed until they were on the point of stalling the machine, and this was rendered possible by the reliance they were able to place upon the air-speed indicator.

The author (Col. Holden), in the course of his reply, said that he agreed with Mr. O'Gorman's remarks concerning the need of funds, and the only source from whence these could be obtained was the pockets of the public. He thought that he had covered the suggestion as to the inclusion of wear and tear, but would make a note regarding it. He did not intend the medical examination of pilots to be similar in character to that which candidates for the Army and the Navy were subjected, but that such examination "should be a special and thorough one." As regards padding, they were now in possession of a substance that tests had shown to be in every way suitable for the purpose. In reply to Dr. Thurston, he mentioned that they had already investigated a number of non-fatal accidents.

The meeting concluded by a vote of thanks to the author, proposed by the Chairman (General Ruck), for his interesting paper.

A New Zeppelin on Trial.

THE new military Zeppelin "Z8" on Tuesday made a trial cruise of nearly five hours duration over Switzerland to the south of Lake Constance. To pass over Mont Sentis, in the Appenzel Alps, the airship rose to a height of 3,065 metres.

A Zeppelin Trans-Atlantic Flyer.

It is announced from Berlin that the Zeppelin Co. are busy at their Friedrichshafen works with the construction of a hydro-aeroplane, with which it is intended to make an attempt for the *Daily Mail* Trans-Atlantic Prize.

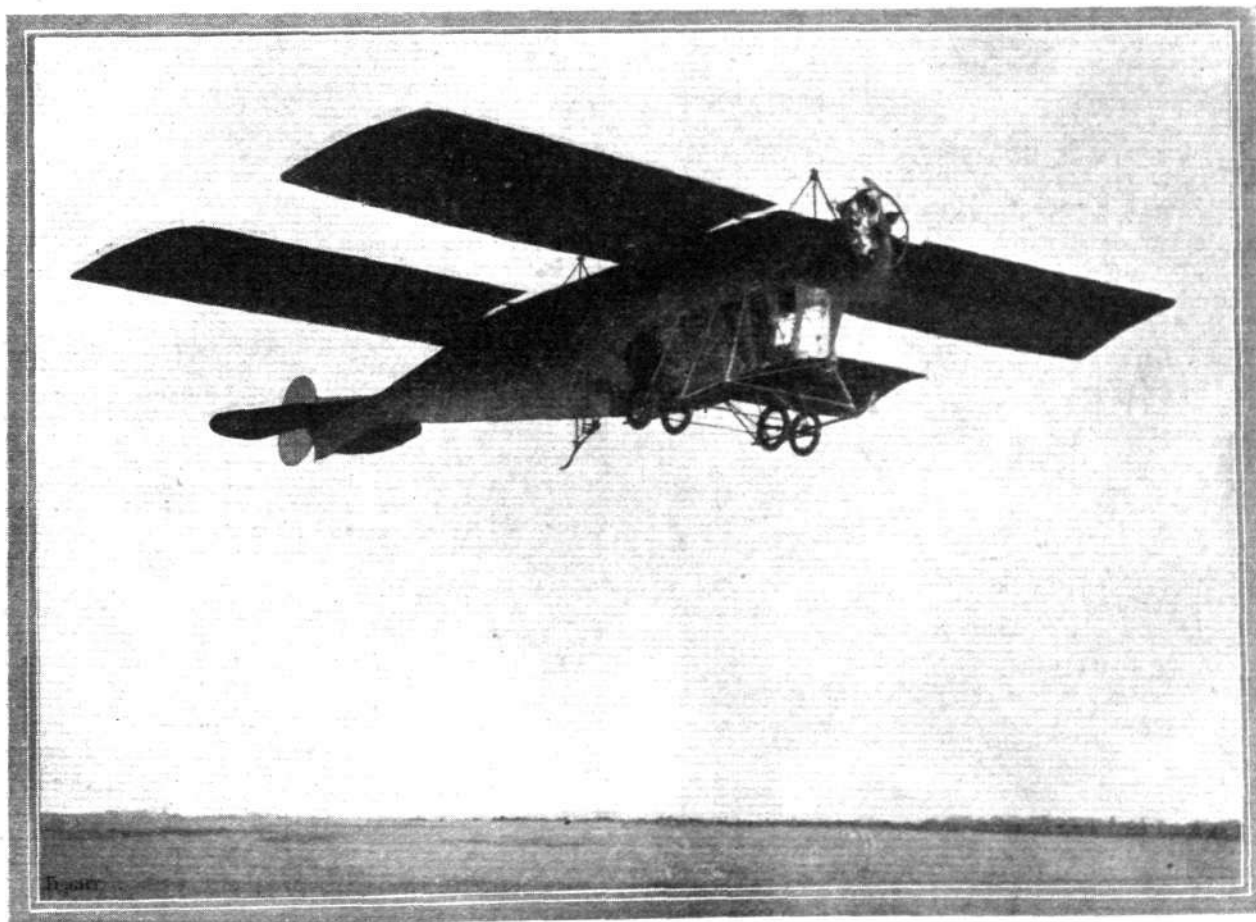
French Airship Adrift.

AFTER a cruise lasting over four hours on the 27th ult., the French military dirigible "Eugene Montgolfier" returned to her station at Maubeuge, and signalled that owing to a mishap to the

machinery a descent could not be made. Subsequently trouble was experienced with the starboard propeller, and the dirigible drifted along the Belgian frontier, her progress being followed by a party of 25 *aerostiers* in motor cars.

An Aerial Fleet for Russia.

It is announced from St. Petersburg that the Russian Government has drawn up a scheme which calls for the provision of no less than 330 aeroplanes and three airships, all to be delivered before the end of this year. Of the aeroplanes 10 are to be of the Sikorsky "Grand" type and 90 others, Sikorsky biplanes and monoplanes of ordinary size. The orders for the bulk of the remainder will be distributed among the Farman, Morane, Deperdussin and Voisin firms in France, but two Rumplers will be ordered in Germany and two Sopwiths in England. The airships will include one Clement-Bayard, one Astra, and one by the Igor works in Russia.



The Albessard monoplane, which was illustrated in FLIGHT the week before last, in the air.

BRITISH NOTES OF THE WEEK.

THE ROYAL FLYING CORPS.

THE following appointment was announced by the Admiralty on the 25th ult.:—Carpenter L. R. Staddon (acting) to "Pembroke," additional, for Felixstowe Naval Air Station, March 24th.

The following appointments were announced by the Admiralty on the 1st inst.:—Lieuts. J. W. O. Dalgleish, to the "Pembroke," additional, for course of instruction with Naval Air-ship Section; J. F. Williams and G. W. W. Hooper, to the "Pembroke," additional, for course of instruction at the Central Flying School. To date May 11. Sub-Lieut. L. Tomkinson, to the "Pembroke" additional, for course of instruction at the Central Flying School. To date May 11.

Assistant-Paymaster E. B. Parker, one of the Flying Officers attached to the Naval Flying School, Eastchurch, has retired through ill-health.

ROYAL FLYING CORPS (MILITARY WING).

WAR OFFICE summary of work for week ending March 28th:—

No. 2 Squadron. Montrose.—There was no flying during the early part of the week, but on the 27th 1,300 miles were flown on B.E. machines. The squadron is well settled in at the new aerodrome.

No. 3 Squadron. Netheravon.—The pilots of "B" and "C" flights were out most days throughout the week. Various experiments were successfully carried out.

No. 4 Squadron. Netheravon.—Flying took place daily after the 24th. Some new workshop plant has been erected and taken into use. Major Raleigh, the O.C. Squadron, returned to duty after his recent accident in Switzerland.

No. 5 Squadron. S. Farnborough.—All the officer and N.C.O. pilots were flying daily throughout the week over the country round Aldershot. Instructional work was continued.

No. 6 Squadron. S. Farnborough.—Flying was carried out daily, and satisfactory tests were made by the wireless flight.

Flying Depot. S. Farnborough.—The workshops were fully occupied with repairing aircraft and M.T. Experimental and instructional work was also carried out.

The Mother Ship for Seaplanes.

It will be recalled that the Navy Estimates include a sum of £80,000 for the provision of a ship for carrying seaplanes, and it is now stated that the Admiralty has acquired a vessel under construction by the Blyth Shipbuilding Co. This vessel, which is

385 ft. long, is to be converted, so as to give a clear run for the machines along the deck, and with this object in view the funnels and other super-structure will be placed right aft.

Salmet's Paris-London Trip.

A FINE flight from Paris to London was made by Mr. H. Salmet, accompanied by T. Elder Hearn, on a Blériot monoplane, on Saturday last. Buc was left at 10 a.m., and a non-stop trip made to Folkestone, which was reached about half-past twelve. Resuming at 4 p.m., good progress was made until nearing the Metropolis when the machine ran into mists, and a descent had to be made at Staines in order to ask the way. Eventually Hendon was reached about ten minutes past six.

The Aerial Derby.

SATURDAY, May 23rd, has been selected as the date for the Aerial Derby, and, in addition to the *Daily Mail* gold cup, a cash prize of £400 and a valuable trophy has been presented by the distributors of "Shell" motor spirit.

A 50-Mile Circuit with Jack Alcock.

LAST Saturday, Jack Alcock, on the 100 h.p. Sunbeam-engined M. Farman, accompanied by Mr. Clarence Winchester, covered a circular route of about 50 miles in a trip of about an hour's duration. Leaving Brooklands, the machine proceeded in the direction of Windsor, afterwards bearing to the left and completing a wide circle, returning to the track from the south. A height of 5,000 ft. was maintained, and a neat spiral finished a most pleasant trip. The Sunbeam ran as sweetly as could be desired.

Mr. Hewitt at Rhyl.

ON Tuesday of last week Mr. Vivian Hewitt flew on his rebuilt Blériot for about an hour round about Rhyl, and went up the Vale of Clwyd as far as Rhuddlan and back. On Thursday he was up again over Rhyl for 1½ hrs., and also went over to Abergele, about five miles from Rhyl. The next day he was up again for one hour, and had as passenger a small black lamb, this being, no doubt, the first time that a lamb has been carried in an aeroplane. A descent was made on the shore at Rhyl, in order that the accompanying photo might be taken. The lamb seemed to take it quite as a matter of course, and trotted back to its mother after the flight as if nothing had happened.

Aviation Week for Scarborough.

NEGOTIATIONS are under way for the organisation of a combined aviation week and regatta at Scarborough at the beginning of July. It is hoped that a feature of the programme will be a series of displays of looping the loop, &c., over the sea by Mr. Hucks.

A Missing Olympia Model.

MRS. FRANCES M. HOLT writes to say that somebody, doubtless in error, took her model tractor monoplane, No. 204, from the recent Aero Show at Olympia. If this should catch the eye of the person who made the mistake, it is hoped that the model will be returned to its owner at 52, St. Mary's Grove, Sheen Road, Richmond.

Vickers Aeroplanes.

LIKE its predecessors the latest album issued by Messrs. Vickers, Ltd., in connection with their aviation department, is a most artistic production and beautifully printed. It contains full particulars of the fighting and scouting types of Vickers biplanes and the Vickers-Levasseur air screws, and is well illustrated by photographs, among which there are several views of the splendidly equipped works at Erith where the aeroplanes are built. A charming water-colour picture of H.M.S. "Emperor of India," built by Messrs. Vickers and launched last November, makes a very effective frontispiece to the album.

Integral Developments.

IN view of the continued expansion of their business so that the number of orders in hand has outgrown the capacity of the works, taken over this time last year, the Integral Propeller Co., Ltd., have had to remove to larger and more commodious premises. As a matter of fact they have secured the works lately occupied by the British Deperdussin Co., at 1B, Elthorne Road, Upper Holloway, N., and, as they entered into possession on Thursday last, that will be their address for the future. The telephone number is Hornsey 2345, while the telegraphic address is "Aviprop (Upholl) London."

Aeronautical Technical Terms.

THE need having become evident for an extension of the preliminary list of technical terms published by the Aeronautical Society in 1910, a committee has been appointed to take up the question.



Mr. Vivian Hewitt and his lamb passenger.

CORRESPONDENCE.

Correspondents communicating with regard to letters which have appeared in **FLIGHT**, would much facilitate ready reference by quoting the number of each letter.

[1848] I would like to state some of my own observations and experiences in comparison with Mr. Maurice J. Dodd's, given in **FLIGHT**, February 7th, 1914, as our methods seem to have been similar.

The times of our observations nearly coincide, and our reception from manufacturers was similarly frigid, owing to their looking for automatic stability. Mr. Grahame-White rejected my inherent stability ideas in 1910, as he had several good patents in automatic stability which he was investigating. As nothing has been heard of these, I presume they were not successful.

Want of means to try my models full size prevented me giving proof, and similar circumstances militated against any further attempts to develop the matter on my part, but in the light of recent evidences from experimental results, both by practical machines such as the Dunne, &c., and results of scientific experiments by M. Eiffel and others, my own observations and deductions are confirmed, and as Mr. Dodd's seem something similar to mine, I can quite understand his letter.

I will compare and add my observations to each paragraph in Mr. Dodd's letter, using the same numbering. Paragraphs missed are those with which I agree.

9. "Where quick responsive control is of most importance horizontal and vertical rudders are less effective." They are least effective at a low speed, but this is not the only case where quick responsive controls are needed.

37. One could go further and say if c.g. is at same point as c.p. of planes, there is no tendency to spin round either vertical or horizontal axes.

38. If the propeller were mounted at c.g. the thrust line could still cut the curved path taken by the c.g., but it would cut it at this point, or in simple words, one could still side-slip, as thrust of propeller is at right angles to planes. For safety I should say—"The thrust line shall remain tangential to the curved path followed by the c.p. of planes," but as, for a stable bank, c.g. has to be on same vertical axis as c.p., it makes little difference.

47. In gliding flight the tail of a gull is always folded, not expanded; small birds having small wing area, supplement this area by expanding their tails, and if their tails are in constant oscillating motion it is due to bad balance of themselves. A swift or swallow with its long tail may manage to use it as a weathercock, but a gull's tail close to the rear edge of wide-spread wings would not give sufficient force to change their direction.

48. Fig. 2 (d). Shortening of lever arm would be very slight unless the wing turned through a big angle. Shortening of the lever arm a few inches, would only bank the machine through an angle depending on distance of c.g. from c.p., so machine having a low c.g. would require a big angular turn of wing, whereas a machine with c.g. on same horizontal line as c.p. would tip transversely till it fell or side-slipped.

Again, retiring the wing would move c.p. behind c.g., which would cause dive as already explained by Mr. Dodd. Angle of dive is again regulated by distance of c.g. from c.p., and if outside wing were advanced to counteract this, it would shorten the lever arm on that side, till both sides were equal before machine regained level horizontal keel.

49 (c) "Weight of machine acting through tiny arm of a few inches"—makes a great difference in the angle turned if c.g. is close below c.p., and little difference if c.g. is long way below c.p. In birds, this adjustment of c.p. in relation to c.g., for transverse and horizontal stability is most admirably done. Pigeons, which glide with wings at a big dihedral angle, give an example of low c.g., and yet they are by no means steady gliders. Small birds, such as starlings, when gliding have their c.g. practically at c.p., if not above, and cannot glide in anything like a strong gusty wind. Swifts can glide and tip transversely and horizontally with utmost speed and ease in any wind due to formation of wings and positions of c.p. in relation to the c.g. Gulls, my chief study, can and do adjust their c.p. when gliding either far above, at or below the c.g. of their bodies, also far in advance, at or far behind their c.g.

I believe the imaginary volume in which a gull, or sea-bird of that species, can place at will its resultant centre of pressure of its two wings is far greater than the volume at the disposal of a land-bird, and as far as I can judge, the c.g. of the bird comes at the c.g. of this imaginary volume.

58. I have seen gulls drop *vol piqué* and flatten out. I have also seen them glide down at a big angle, more like parachuting, dropping roughly 6 ft. in 1 ft., by increasing the angle of incidence of their wings, yet remaining on an even keel, if I may use the expression for having their bodies horizontal. In this position they come down very slowly and alight gently, seeming to use their wings

and tail as a parachute, and also as brakes against their forward motion, long after they have lost momentum from any previous direction of motion, a drop of 30 ft. taking roughly one minute, and I see no reason why an aeroplane, with efficient planes capable of placing them in any desired position, using this principle should not land with a horizontal speed of half or less than that at which it is capable of travelling, and with but slight increase of vertical speed.

In conclusion, I may add that, as a result of my observations and experiments on models, in 1909 I applied for and was granted a patent for the stability, improved efficiency and control of aeroplanes, having very much the principles and formations of wings put forward by Mr. Dodd. Also that my ideas can be put on either mono- or bi-plane, and that any automatic stability device could be used if required.

Wishing you every success,

LEWIS RENATRAU.

Montreal, Canada, March 18th.

Spotting Talent.

[1849] Your leading article this week asks the question, "What is wrong with the Military Wing?" The answer to this is very simple—so simple that, when supplied, few people will think it worth considering. It is a similar question to that which was asked when the Great Eastern Railway Co. had to go to America for their manager. It is merely that we in this country appear to be short of that happy instinct which is capable of recognising talent.

A few weeks back there was some correspondence in your paper with reference to the aviation industry. This came to an end, as the War Office had at last recognised the position taken up by the reformers, and organised an Aeronautical Inspection Department.

When all is said and done, if you wipe away all the side issues, and get right to the bottom of many of these troubles which people do not appear to understand, you will find it is a case of our native talent not being recognised in one way or another. Recognise talent as something which should be encouraged, and the rest is plain sailing.

"OCTOPUS"

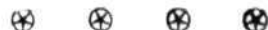
A Big Distance Record.

[1850] I read in this morning's paper an account of a law suit in the King's Bench Division, during which Mr. Gordon England, the airman, claims to have flown a distance of a hundred thousand miles (100,000 miles).

Surely he doesn't seriously mean this. I find by a rough calculation that in three years' hard flying—flying every day without a break, Sundays included—one would have to average more than 91 miles per day, which, as the Americans might say, would be "some" stunt; in fact quite good training for a round the world flight.

"A FLYER OF THREE YEARS' HARD EXPERIENCE."

Skegness.



OUR READERS ASK

WHY is pendulum stability in disrepute?

The argument against pendulum stability is based mainly on the natural tendency of any pendulum device to keep on swinging. So long as the inertia introduced by the pendulum principle is sufficient to prevent any disturbance in the attitude of the machine, the pendulum is, of course, as good as anything else. The more important point, however, is the question of how a machine recovers itself after it has been disturbed. No machine can hope to be so stable as to never be disturbed under widely varying conditions, and what is meant by natural stability is the power of recovery by virtue of qualities inherent in the design. In a ship, for instance, it is just the same. All are affected by the prevailing conditions and roll to a greater or less extent. It is their power of recovery that makes them stable. A very stiff ship, that is to say one that rolls far less than the average, is often regarded with suspicion owing to the feeling that if it once heels over it will capsize.



Aeronautics and Invention.

FROM the annual report of the Comptroller of Patents it is evident that, as usual of late years, during last year the various problems connected with transport were given a great deal of attention by inventors. The report goes on to state that the interest in aeronautics was well maintained. The number of applications showed a considerable increase, but inventors appear to have confined themselves mainly to improving the details of the well-known types of machines. There was also a well-marked increase in inventions dealing with internal-combustion engines, most of which related to engines either for vehicular propulsion or for aeronautics.

FOREIGN AIRCRAFT NEWS.

New World's Height Record.

FOLLOWING his successful attack upon the world's record height for pilot and passenger, referred to in last week's issue, Linnekogel on Tuesday attacked the world's record for pilot alone, and reached a height said to be 6,350 metres (20,800 ft.), which beats the old record of 6,150 metres of Legagneux. As before, he used a Rumpler monoplane fitted with a vertical water-cooled Mercedes motor.

New Passenger Record by Garaix.

AT Chartres, on the 28th ult., on the Paul Schmitt biplane, fitted with 160 h.p. Gnome motor and Integral propeller, Garaix made a new world's record by taking eight passengers to a height of 1,550 metres in 44 mins. The passengers were MM. Labeille, Andre, Rene, Legros, Pelletier, Poulain, Renault, and Turon, and, in addition, the machine carried 150 litres of fuel and 40 litres of oil, so that the total load was 758 kilogs. The machine landed by a spiral *vol plané* lasting 10 mins.

A further record, this time with nine passengers, was made by Garaix on Tuesday. The machine was exactly the same as for the preceding record and the passengers carried were MM. Brand, Dumez, Garnier, Laisne, Lebaille, Malnou, Peletier, Poulain, Renault. The machine attained a height of 1,580 metres (4,820 feet) in 59 minutes and came down by a spiral *vol plané* taking nine minutes. It also carried 150 litres of fuel and 40 litres of oil, the total load lifted being 833 kilogs.

A German Passenger Record.

ON the 25th ult., Albert Puschmann tried to beat the world's record for duration with passenger, but after flying for 5½ hours at a height of 2,000 metres, which is a record for Germany, he was compelled to come down owing to a mishap with the motor. He was using an Ago biplane, fitted with 130 h.p. Argus motor.

E. Vedrines and Testulat Killed.

WEDNESDAY was a black day for French aviation, for in the afternoon two well-known and experienced pilots, together with a passenger, lost their lives. The first accident occurred at Rheims to Emile Vedrines, a brother of Jules Vedrines. He was testing a new monoplane when it side-slipped and capsized, falling to the ground from a height of about sixty feet, Vedrines being killed on the spot. He secured his certificate in July, 1911, and was placed second in last year's race for the Gordon-Bennett cup.

The second accident occurred not far away, at Chalons Camp, about half an hour later. It appears that a machine piloted by Pierre Testulat was flying over the camp when it was caught in a *remous* and in diving, caught one of the pylons marking the flying course. The machine crashed to the ground and both pilot and passenger, M. Avigny, were killed instantaneously, the machine subsequently catching fire.

Three New Loopers.

ON Tuesday and Wednesday of last week E. Ehrmann looped the loop in France by way of preparation for an exhibition tour in his native country, Algeria. Pierron also looped the loop last week on a Blériot fitted with a 6-cylinder Anzani motor. On Sunday Bulimbasic, a pupil of the Blériot School at Buc, made a loop.

Anzani for Looping.

IT is interesting to observe that two of the most recent loopers have relied upon motors of the fixed type. In both cases Anzani motors were used, Goodden having a 45 h.p. Anzani on his Caudron, while Pierron also used a 6-cylinder Anzani on his Blériot.

A New Henry Farman.

A DEPUTATION of French military officers visited Buc on the 26th inst. in order to witness tests with the latest military biplane of the *blindé* type produced by Henry Farman. Piloted by Bill and carrying a load of 306 kilogs. it climbed 500 metres in 9 mins.

Testing a New Morane.

A NEW 80 h.p. Morane-Saulnier monoplane of the *blindé* type, built for the Russian Government, was tested by Pequet at Villacoublay on the 26th ult. With a useful load of 160 kilogs., it climbed 500 metres in 2 mins. 30 secs. Subsequently a test was made with an 80 h.p. "Parasol," which took a load of 265 kilogs. up to 500 metres in 4 mins. 10 secs.

Aerial Touring by Maurice Farman.

ON the 25th ult., accompanied by Senouque, Maurice Farman paid a visit to Tillieres, while the Marquis de Larenty-Tholozan, with Derome, made a trip to Chartres, passing by Chevreuse, Dampierre, Rambouillet and Gallardon. Late in the evening, Maurice Farman, with Derome, made a long flight at a good height on a machine fitted with Fallot headlights.

On Monday Maurice Farman with M. Barbarou as passenger made a round trip to Dreux, Chartres, Orleans and back to Buc, a

stop being made en route at Etampes. Renaux, on the machine he will use for the Aerial Rally, made a trip to Nonancourt and back to Buc.

Juvisy-Rheims in Fast Time.

ON one of the light scouting Ponnier monoplanes fitted with a Rhone motor, Emile Vedrines, on the 30th ult., went from Juvisy to Rheims, covering the 160 kiloms. in 58 mins.

Two Long Flights in Germany.

ON Monday, two flights of about twelve hours duration were accomplished in Germany on monoplanes. Krumstiek left Dresden at 5.30 a.m., and made his first stop at 5.32 p.m. having been in the air for 12 hours 2 minutes, while Tersen, who started from Neumuenster at 7 a.m., concluded a flight of 11½ hours at Johannisthal at 6.30 p.m.

German Machines for Turkey.

IT is stated that the Turkish Government has placed a large order for military aeroplanes with the Aviatik firm of Mulhausen, and as soon as the weather is more favourable, Ingold is to make an attempt, on one of the machines, to fly from Germany to Constantinople.

German Fatalities.

AT Johannisthal, on the 26th ult., Lieut. Groener was struck on the head by a propeller, and received such injuries that he died the next day. On Monday, a military biplane fell near Kurve, and one of the occupants, Capt. Reinhardt, was killed, while his companion sustained severe injuries to his leg and head.

Quick Climbing in Russia.

SOME remarkable flying in the order of quick rising was accomplished by Gaber-Vlinsky on a Farman biplane at St. Petersburg last week. Carrying Capt. Shabsky as passenger, the total weight carried being 327 kilogs., the machine in 2 mins. climbed 500 metres; in 4½ mins., 1,000 metres; in 7½ mins., 1,500 metres, while in 35 mins. the height was about 3,000 metres. A descent then had to be made owing to the carburettor freezing.

The Indian Flying School.

A MESSAGE from Allahabad states that the new flying school for the Indian Army at Sitapur was inspected by the new Commander-in-Chief, General Sir Beauchamp Duff, on Friday of last week. Subsequently, the General was taken for a flight on a Farman biplane by the Commandant of the School, Captain Massy.

Another American Event.

A PROJECT is now being considered in the United States for a race for aeroplanes from New York to the Bermuda Islands, a distance of about 700 miles. It is expected that the prize fund will amount to at least £5,000.

The Aero Club of America has also been considering the organisation of a race for waterplanes from the Statue of Liberty in New York Harbour to the Boston Light and back, a distance of about 550 miles.

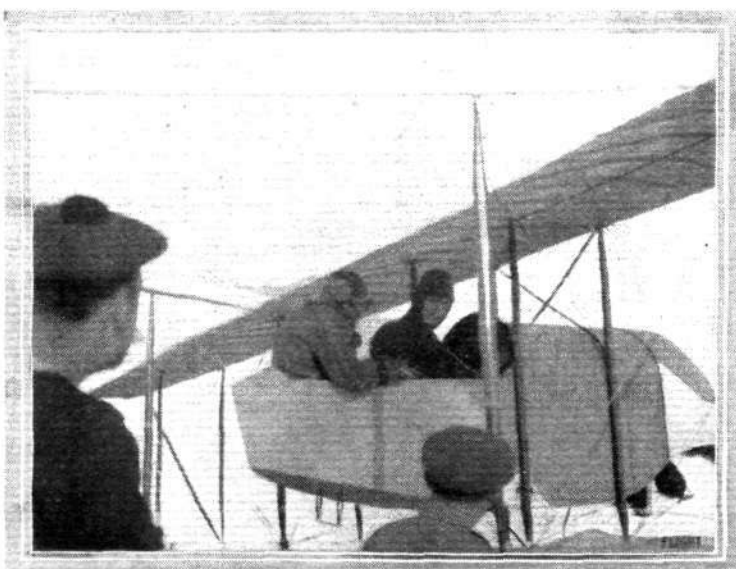
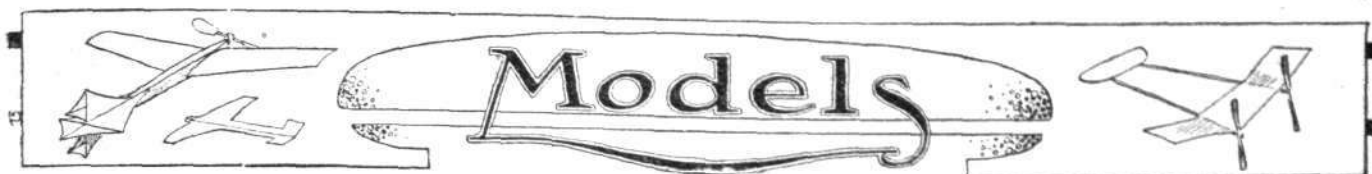


Photo by Capt. Halahan.

Rene Caudron in the pilot's seat of the new Caudron land and water biplane with, as passenger, the French naval pilot who will be flying this craft.



Edited by V. E. JOHNSON, M.A.

Aero Models at Olympia.

(Continued from page 352).

REFERRING back for a moment to the question of model and prototype, more than one aeromodelist with whom we had the pleasure of talking at the Show, clearly held the opinion that whereas in other model work one could build *practical working* scale models of full-sized work, in aeronautical matters this was not so, and that therefore to carry the matter to a real logical conclusion, no such thing as a really practical working model aeroplane exists. There undoubtedly exists a line here on which an argument can be hung; but in the end, either in aeronautical models or others the question is this: How far must one machine resemble another, and how much detail must be put into it before one can be called the *model* of the other? Logically speaking, they ought, no doubt, to be exactly alike and to scale. But the term model has always been used in a more or less elastic sense, when one machine in its general broad outlines, *dimensions*, and principles did resemble another. We think no greater harm could be done to model aeroplaning than to set up a claim that it is an art to itself—*apart from other model work*. More than one attempt has, however, been made to do this. You will never impress the public (on whom, in the end, you depend for your support), you will never raise the *status* of model work in this country, nor will you get the full-sized worker to regard it as anything else than a sport and a plaything, whilst at public exhibitions the predominant feature is a machine, which to an ordinary person bears but a very slight resemblance to the full-sized article by its side. In a word, you will never be taken *seriously*. The question is such a vital one from the *model movement* point of view, that we trust readers of FLIGHT will forgive this break in the more detailed account proper of the exhibits at Olympia, which contain many points of interest, which will be dealt with in due course, and will be, we trust, especially valuable to aeromodelists and others interested who were unable, owing to distance, &c., to visit the Show.

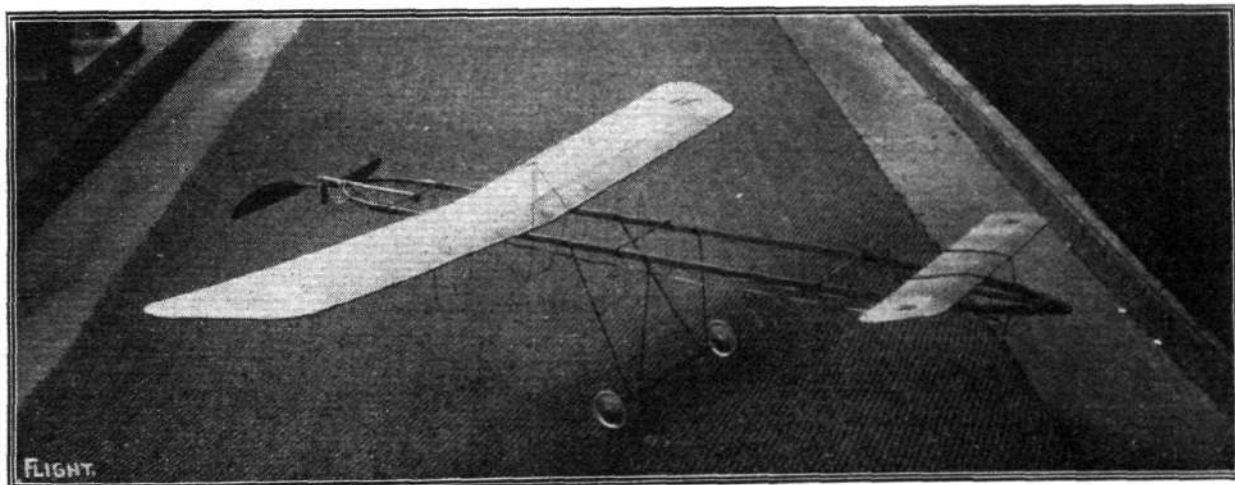
wire frame. Diameter of propeller, 16 ins., driven by 4.5 ozs. of rubber, ten strands, $\frac{1}{8}$ in. thick being used on either gear. The main plane is constructed of bamboo. Chord, 10 ins., covered with Bragg-Smith silk. Elevator also of bamboo, 22 in. span and 4.5 chord. Weights: Frame and chassis, 11 ozs.; plane and elevator, 4.5 ozs.; rubber, 4.5 ozs.; total, 20 ozs. Dead weight carried by machine, 5 ozs., making a total weight of 25 ozs. Surface about 4.5 sq. ft., and flies about 18 to 20 m.p.h. Best duration (to date) 41 secs. There are several points of special interest about the above particulars, viz., the relation between the span and the length, the latter being only 3 ins. more than the former, and the fact that a machine with such dimensions and of such a size when carrying a dead weight of no less than 5 ozs. can make a duration of no less than 41 secs. and very possibly more. It only serves to show that perfectly adequate result can be obtained with machines built on rational lines, the fact of the matter being that when you come to models of a certain size and above a certain weight, you have got to build them on such lines to achieve any success. We shall be glad to receive particulars of other "weight lifters" exhibited at Olympia.

(To be continued.)

Littlestone Model Aero Club.

Extraordinary Moonlight Flights.

We have received the following communication from Mr. Bruce Herd of the above club:—"I am just writing a few lines to see if you can throw any light on the curious flying of some of our members' models. Four of us went out this evening (March 12th) to do some model flying by moonlight, about 9 o'clock till 9.30. All the machines had been flying very well during the past week, when some good all-round flights were made. But to-night one of our members sent off a twin-screw monoplane, and it commenced cutting some extraordinary figures for a few yards, and then dived straight down and broke its back. A second member sent up a similar machine to the first, and it rose to about 50 ft., and dived



"Flight" Copyright.

Mr. L. H. Slatter's weight-carrying model.

Mr. L. H. Slatter's Weight Lifter.

In Class VI, the weight-carrying models, capable of rising from the ground under their own power, the minimum weight of the machine *unloaded* had to be one pound, and each model had to carry a dead weight of one quarter its own weight, this weight not to be any part or parcel of the machine proper, the weight or weights to be detachable for the purpose of weighing. In order to qualify, the model must show itself capable of making a flight of at least 15 secs. in duration.

In Mr. Slatter's case, the length is 5 ft. 3 ins., the span 5 ft. The frame—double spars of spruce tapering fore and aft, solid spruce $\frac{1}{2}$ in. by $\frac{1}{4}$ in. section. Distance pieces or spreaders, bamboo. Chassis of umbrella ribbing with sprung wheels—Morane design. Wheels, aluminium, 2.5 ins. in diameter. Twin gears, 1 in. in diameter. Bonn's geared wheels mounted in a well-designed steel

straight down at a great speed, and suffered the same fate as the first. A machine built from Mr. W. E. Evans' drawings, recently published in FLIGHT, was next sent up by myself. The machine flew about 20 yards, cutting all kinds of capers, and then rose high up, and finished exactly the same as the others, viz., smashed to pieces. At last a machine which had flown well for weeks was launched, and was soon flying upside-down, and this, too, finished with a sudden rise and straight dive, and behold, yet another broken model. Now what do you make of this? Four models smashed in one night and all of them in the same way. We should be very much obliged to you if you could possibly tell us what was the cause of the smashes. I would like to thank you for the benefits I have received from your most excellent column, which I and my club-mates look forward to each week."

We should think the above quite easily creates another record.

Personally, the writer has never done any model flying by moonlight, and would therefore prefer, in the first instance, to receive the opinion of some who have. Our correspondent says nothing about the nature of the ground, nor the atmospheric conditions, save that it was moonlight. More information on this point is wanted. Models, of course, fly much better in the daytime, but the mere difference between day and night would not account for such a state of things as described above. What about the wind at the time? Were the models all of the Canard type?

We shall be glad to hear from any reader who can throw any light (other than moonlight) on the affair. So far, we have never known a "model" have a thirst other than for lubricant, and no lubricant that we know of contains anything stronger than salicylic acid, or (as a wag) one might suggest the "models" had had a drop too much.

KITE AND MODEL AEROPLANE ASSOCIATION.

Official Notices.

British Model Records.

Singlescrew, hand-launched	Duration	D. Driver...	85 secs.
Twin screw, do. ...	Distance	R. Lucas ...	590 yards.
	Duration	G. Hayden ...	137 secs.
Single screw, rise off ground	Distance	W. E. Evans ...	290 yards.
	Duration	W. E. Evans ...	64 secs.
Twin screw, do. ...	Distance	L. H. Slatter ...	365 yards.
	Duration	J. E. Louch ...	2 mins. 40 secs
Single-tractor screw, hand-launched ...	Distance	C. C. Dutton ...	266 yards.
	Duration	J. E. Louch ...	91 secs.
Do., off-ground ...	Distance	C. C. Dutton ...	190 yards.
	Duration	J. E. Louch ...	94 secs.
Single screw hydro., off-water ...	Duration	L. H. Slatter ...	35 secs.
Single-tractor, do., do. ...	Duration	C. C. Dutton ...	29 secs.
	Duration	L. H. Slatter ...	60 secs.

Trials at Hendon.—Will all competitors kindly assist the hon. sec. in running off these trials, especially on Saturday morning, by standing to their respective stakes and by getting ready when called upon? The hon. secretaries of the various clubs will assist by placing their men in position and reporting non-attendance of any member who will be unable to compete.

President.—The Council beg to announce that the Right Hon. The Earl of Lonsdale has kindly consented to become the President of the Association, he having been nominated by Sir Bryan Leighton and duly seconded. The date of the general meeting will be fixed and announced in next issue.

Membership.—Will any member who was able to enlist the support of any friends at the Aero Show kindly forward their name, addressed to the hon. sec.? One of the latest recruits to the Association is Mr. A. B. Clark, the hon. sec. of the South-Eastern Aero Club, and the hon. secretaries of the affiliated clubs hope to see this club affiliated so that it will be eligible to compete in the Farrow Shield Team Contest.

Exhibition at Felixstowe, May 6th to 16th.—The secretary of the Felixstowe Advancement and Winter Season Association visited Olympia with a view to seeing the various models and asking the exhibitors to lend them for his exhibition. He selected Exhibits Nos. 44, 51, 60, 63, 77 and 79, 83, 200, 202. If any of the gentlemen who own these models will show, his association will pay the carriage both ways and see that they are carefully packed for return journey.

Anglo-American Exhibition at Shepherd's Bush.—If possible, a model section will be arranged for at this exhibition, and the hon. sec. will be pleased to arrange if the modellers will give him their support. The exhibition is open from May to October, and the models will be looked after while on show. Will all wishing to exhibit send in their names at once to Mr. Akehurst? Also it is hoped to arrange contests in the Stadium for steering and hydro-aeroplanes.

Letter from R. V. Tivy, of Bristol and West of England Aero Club, and Provincial Exhibitors.—"I duly received this morning by passenger train the model (No. 82) which I exhibited at Olympia. The model was excellently packed in a crate and arrived quite undamaged. I must congratulate you on the excellent arrangements which were made for dealing with the exhibits. No one need have any hesitation in sending models from the provinces to any exhibition which is under the management of the Kite and Model Aeroplane Association."

27, Victory Road, Wimbledon.

W. H. AKEHURST, Hon. Sec.

AFFILIATED MODEL CLUBS DIARY AND REPORTS.

CLUB reports of chief work done will be published monthly for the future. Secretaries' reports, to be included, must reach the Editor on the last Monday in each month.

Aero-Models Assoc. (N. Branch) (27A, SEDGEMERE AVENUE, EAST FINCHLEY, N.)

APRIL 5th, practice at 10 a.m. April 11th, handicap duration competition 3 p.m.

Monthly Report.—Owing to the unfavourable weather, little flying has been done during March. Messrs. Coleman, Root, Claffin, Fletcher, Tosh, and Hindsley have had machines out when possible, and other members have visited the ground. A good deal of constructional work is going on, however, and several interesting machines should make their appearance shortly, including a compressed air model of Mr. Fletcher's, a similarly driven machine of Mr. Murray's, and a steam-driven twin screw model of Mr. Claffin's. The Association's shield has been won this quarter by Mr. C. C. Claffin by a flight of 60 secs. duration with a tractor, Mr. F. G. Hindsley being second with 50 secs. The Aero Show has, of course, been the chief attraction of the month, and two club visits were paid to it. The Association exhibited the following models:—Twin screw, loaded elevator, A frame models by Messrs. R. L. Rogers, A. Rogers and J. McBurnie; hydro-aeroplanes of similar type and each fitted with detachable wheels by Messrs. McBurnie and R. L. Rogers; a twin screw, loaded elevator, hollow spar model by Mr. C. C. Claffin; a twin screw, loaded elevator model with built-up fuselage, low c.g. and the propellers arranged one above the other instead of the more usual manner; a twin gear, hollow spar tractor by H. E. Fletcher; a twin gear, hollow spar tractor by F. G. Hindsley; single propeller, loaded elevator, bow frame models by E. Coleman, O. W. Root, and W. Knight,

Proposed Model Aero Clubs.

Mr. G. Greenwood-Bentley of "Mabledon," 5, Waveney Avenue, Peckham Rye, S.E., writes: "An effort is being made to form a model aero club in the vicinity of Peckham Rye, and I should be glad if you could find space in your valuable columns to announce that I shall be glad to hear from those interested who would care to become members and help to form a club. It is proposed to run the club on social and mutually instructive lines, and we hope it will in every way be successful. Should this be so, I shall be glad to send you periodical reports as to our progress."

Mr. H. S. Digby, of 78, Thornbury Road, Spring Grove, Isleworth, W., also writes: "I should be very glad to hear from anyone desirous of forming a model aeroplane club in and around this district. My idea is to, first of all, obtain a rough idea of the number of model enthusiasts in this district."

Mr. Root's being twin geared; a single propeller, floating tail, built-up frame, model by T. W. Dann. Evening meetings were held at the club-room as usual.

Bristol and West of England Aero Club (Model Section)

(42, ROYAL YORK CRESCENT, CLIFTON, BRISTOL).
Mr. B. C. HUCKS will give a demonstration of flying, including flying upside down and looping the loop, at the Buffalo Bill field at Horfield on April 8th, Good Friday, April 10th, and Saturday April 11th, each day at 3 p.m. Admission 2s. 6d., 1s., and 6d. Members' badges and tickets, price 2s. 6d., admitting to the Aero Club enclosure and to the hangar at 2 p.m. on any one of these days, may be obtained in advance by applying to Mr. P. A. Thompson, c/o. A. Alan Jenkins, Star Life Buildings, Bristol. The annual general meeting of the Model Section will be held at the earliest possible date. There will be model flying meetings at the Sea Walls at 3 p.m. on Saturdays, April 4th, April 18th, and following Saturdays, except when otherwise notified to members.

Croydon and District Ae.C. (82, CLARENDON ROAD, CROYDON).

FARROW SHIELD.—The club will compete for this trophy. Change of address.—All communications in future must be addressed to the hon. sec., W. J. Finnigan, 82, Clarendon Road, Croydon.

Monthly Report.—March has not been a busy month with this club as regards the actual flying of models, but Messrs. Bell, Mullins, Smith, Pavey, Carter, and Taylor have been out. However, members have been fully occupied with matters in connection with the Aero Exhibition at Olympia. The club had twelve exhibits, and it is hoped to considerably improve on this number next year. Will those members who are entered for the competitions at Hendon Aerodrome on Saturday, April 4th, please apply to the secretary immediately for their passes to admit them to the aerodrome? Messrs. P. Hart and W. Finnigan have kindly offered a cup amongst the members, and it will be flown for probably in the Easter holidays, but the exact date will be announced later in FLIGHT. This competition will be for r.o.g. machines of all types—tractor and single propeller models will receive a suitable handicap. Marks will be allotted as follows: Design, 50; stability, 25, and 1 mark per second duration. The heading "Design" covers the general efficiency of the model, i.e., quantity of rubber required to fly the model proportionate to its weight combined with its duration, design, and strength of landing chassis, workmanship, &c. Stability will be regarded in this competition as steadiness in the air, gliding angle, and directional control. Members are very enthusiastic over this competition, and everyone has entered.

Leytonstone and District Aero Club (64, LEYSPRING ROAD).

APRIL 5th, flying on Wanstead Flats at 6.30 and 10 a.m. The competitions in connection with Olympia take place to-day, April 4th, at the Hendon Aerodrome and Welsh Harp.

Monthly Report.—March 1st, 10 members met on Wanstead Flats, and Mr. H. Bedford obtained some good flights with an 8-oz. hydro. Mr. H. Bond was flying a r.o.g., and Mr. F. Grattan a hand-launched model. March 8th, members met at club-room. March 15th, 3 hand-launched models were flown. March 22nd was again wet and members met at the club-room. March 29th, 11 members met 6.30 a.m. to tune up models exhibited at Olympia. 8 hydro. were flown with varying success, both off water and off ground. 10 r.o.g.s. were in evidence, flown by different members, and also a single-screw r.o.g. There was a slightly larger number when the members again met at 10 a.m., and the process of tuning up was continued throughout the morning. This club exhibited 34 models at Olympia, and while on the subject, it may be of interest that at the close of the Exhibition Mr. Charles Hersom's hydro. rose successfully from one of the tanks provided for the models.

N.E. London Model Ae.C. (47, JENNER RD. STOKES NEWINGTON, N.)

FLYING on Hackney Marshes at 3 p.m. Saturdays; the club extends a cordial welcome to non-members at their meets.

Monthly Report.—The following Olympia models have been under test—W. A. Dore's twin canard (r.o.g.) Burton's tractor, and a triangular framed tractor with special main plane and a 15 oz. hydro. by the secretary. A 3 ft. by 10 ft. r.o.g. board made of three-ply wood has been obtained for the club. The competition programme for the year will be ready in a fortnight.

Paddington and Districts (77, SWINDERBY ROAD, WEMBLEY).

APRIL 4th, practice at Sudbury. Members who exhibited in Class 2A at Olympia take part in the trials at Hendon Aerodrome.

Monthly Report.—Feb. 28th, Mr. C. C. Dutton obtained many good flights with his hydro, the pond in the flying ground providing the necessary rise-off surface, the best duration being 30 secs. In the competition for medals offered for Olympia Show models Mr. W. E. Evans made an average of 35 secs. in Class 2A; Mr. F. W. Johnson made a single flight of 48 secs.; Mr. H. Weston tuning up 6 oz. tractor and 8 oz. twin propeller models; Mr. M. Levy, with single propeller model, obtained 47 secs. h.l. Mar. 1st, in the Olympia models competitions, Mr. D. Driver made an average of 49 secs. in Class 2A, and Mr. W. E. Evans an average of 36 secs. in Class 2B; Mr. T. Carter tuning up single propeller weight-carrying model, found to be underpowered; Messrs. M. Levy and D. Driver tuning up single propeller models, the latter obtaining 64 secs. h.l. Mar. 14th, members took models to Olympia Aero Show. The exhibits were as follow: In Class 2A, 8 oz. twin propeller—Messrs. J. R. Barrett, R. Bird, T. Carter, D. Driver, W. E. Evans, F. W. Johnson, M. Levy, and H. R. Weston. In Class 2B, 6 oz. single propeller—Messrs. D. Driver, W. E. Evans, and M. Levy. In Class 6, single screw weight-carrying, Mr. T. Carter. Mar. 28th, the last day for competitions for Olympia models, in Class 2A the averages were: R. Bird, 53½ secs., won 1st prize, silver medal; D. Driver, 42½ secs., 2nd prize, bronze medal; T. Carter, 33 secs.; F. W. Johnson, 28 secs.; and W. E. Evans, 22 secs. The two bronze medals offered in Classes 2B and 6 were not won. These may be put up for competition later on.

Reigate, Redhill and District (THE COTTAGE, WOODLANDS AVENUE, REDHILL).

APRIL 4th, period for winning Messrs. Bonn & Co.'s prize terminates on this date.

Monthly Report.—Very little flying during the month owing to weather and Olympia Exhibition. Members visited Olympia on 21st. Mr. R. G. Wilson has been making very creditable flights with a floating tail mono. Messrs. Key, Morton, Sutton, Hooton, Funnell, Hoyle and Greenhead have also been out. Mr. R. G. Wilson is "in the running" for the Bonn prize, and competition is becoming keen.

Sheffield Ae.C. (41, CONISTON ROAD, ABBEYDALE, SHEFFIELD).

APRIL 4TH, members wishing to take part in the *Sheffield Daily Independent* Prize should arrive at the Aviation Ground, Owlerton, as early as possible. April 11th, tractor biplane contest. April 13th, weight carrying, also novices and juniors' competition. General meeting April 4th postponed owing to aviation meeting.

Monthly Report.—March 7th, general meeting at Mr. O. H. Broomhead's restaurant. Decided April 11th next date for tractor biplane contest; time and place later. March 28th, through the kindness of the *Sheffield Daily Independent*, who have made arrangements with Mr. Harold Blackburn for a week's flying demonstration at the Owlerton Church Grounds, Penistone Road. A good number of the members turned up, six with machines. Mr. W. H. Bagshaw's and Master C. Dewsnap's machines accomplished some good flights, circling over the people, then disappearing for nearly half a mile. The flying is to continue up to April 4th (inclusive), on which day the *Sheffield Daily Independent* is giving a special prize to the member of the club who makes the longest duration record flight with a hand-launched machine. Mr. Blackburn has expressed a desire to act as judge. He was greatly interested in the constructional part of Mr. W. H. Bagshaw's machine.

Stony Stratford and District Kite and Model Ae.C. (OLD STRATFORD).

APRIL 1ST, meeting at Wolverton at 8 p.m. Subject: Reading of Mr. Handley Page's address to the K. and M.A.A. April 4th, postponed March competition at Old Stratford, to commence at 3 p.m. April 16th, lantern lecture at Public Hall, Stony Stratford. Subject: "Progress of Aviation"; admission 3d. Members please note that the building evening will not be held on April 15th, on account of the lecture. Flying every Saturday at Old Stratford, from 2.30 p.m.

Monthly Report.—Buckingham Branch.—A discussion was held Feb. 27th, topic "R.O.G. Models," when there was a good attendance. March 18th, building night, new members signed on and active work on new machines for branch competition. The members, especially the juniors, are improving considerably in their flying. During the month every moonlight night has seen flying and also lost models. March 21st, competition for branch members only for prizes contributed by local tradesmen. Competition flown in strong winds, the results being: Mr. W. Sturgess 1st, B. Williams and W. Palmer 3rd. Flying every Saturday at 3 p.m., London Road ground. Stony Stratford.—Business meeting held at Wolverton, March 4th. During the month regular flying has been indulged in, some of the members trying cross-country flying, with dire results to machines.

Wimbledon and District (165, HOLLAND ROAD, W.).

APRIL 3rd and 4th, Aero Show Trials at Hendon. April 5th, flying as usual.

Monthly Report.—Fifteen machines were exhibited on the Club stand at the Aero Show, there being 7 twin-screw machines, 7 single-screw, and 1 ornithopter. March 28th and 29th, Mr. Easdale flying his tractor with light-lifter, getting fine flights both h.l. and r.o.g. carrying weights. Unfortunately, however, a troop of Territorials rode over his machine at the conclusion of a flight, breaking nearly everything except the propeller. It is hoped that he will be able to repair it in time for the trials on April 3rd. Mr. Laing had out his tractor, and after some adjustment got it going very well flying at a great height and doing about 50 secs. duration. Mr. Tucker also had out his tractor, the machine proving very fast and climbing well. Mr. Slatter was doing long flights with his twin-screw r.o.g., doing durations up to 100 secs. Mr. Powell's r.o.g. was flying well, making one flight of 110 secs. out of sight. Mr. Hayden obtained the same duration with his twin-screw, also flying very high. Single-screw pushers were flown by Messrs. Houlberg and Boniface, the former flying very high and doing durations up to 40 secs.; the latter, though not so high, obtained durations up to 50 secs. and showed great stability. On the 29th flying was spoilt by the rain, which fell during the greater part of the day, but Mr. Houlberg, flying his twin-screw, made some fine flights, the best being one of 138 secs. Mr. Hayden too was flying well, his best flight being one of 100 secs. Mr. Slatter had out his hydro. fitted with wheels, which proved a good climber, the best duration being 62 secs. Mr. Laing's twin-screw with swept-back wings was also flying well, showing good stability.

Windsor Model and Gliding Club (10, ALMA RD.).

Monthly Report.—Unfortunately the two members who were entering engines for the Aero Show were unable, through lack of time, to finish them, and this detracted some of the interest in the club exhibit. The models, nevertheless, which were shown compared quite favourably with the others, and the similarity in design was not so evident as in other exhibits. Some valuable lessons were learnt, the full-size machines being studied diligently by the members. One of the old members, Mr. E. A. Dousett, exhibited a model on the club stand. In regard to the full-size machine, unless more support is forthcoming, it is extremely doubtful whether the club will be able to start; although the sum required is quite small, great difficulty has been experienced in getting help. The engine has been tuned up splendidly by Mr. G. Petit and Mr. H. Deller, although quite a lot of alterations had to be made. It is hoped, however, that matters will turn out more favourably. One of the new members is Mr. A. Payze, an old Bristol pilot, and whose experience in the flying and construction of machines will be of great assistance to the club, and members are to be congratulated upon securing such a useful member. A little flying has been done by S. Spicer, F. Camm, E. Stanbrook, S. Dandridge and S. Camm. Messrs. W. Rogers, S. Camm and E. Stanbrook are competing in the tractor class at Hendon on Saturday, and Mr. Dousett in the rise-off twin propeller class. Local readers are urged to join, so that a successful season may ensue. The club is now affiliated, so that members will be able to enter more competitions, and also take part in the inter-club contests for the Farrow Shield.

UNAFFILIATED CLUBS.

Bath and Somerset Aero Club (199, WELLSWAY, BATH).

An open competition will be held on Combe Down on April 25th. Events as follows:—1, r.o.g. duration; 2, distance h.l.; 3, speed 100 yards; 4, duration h.l.; a prize of 10s., kindly presented by Mr. Gait, for the longest flight during the afternoon, provided there are six entries. Further particulars can be obtained from hon. sec.

Monthly Report.—Despite the inclement weather much useful work has been done both indoor and out. Jennings, Knight and Brampton with twin-screw monos., Cross single-screw mono. and twin biplane, Tolman and Pickett with single-screw monos., Lewis with tractor mono. and White with twin-screw biplane. All steadily improving. Seven new members were elected at the annual general meeting on March 23rd.

Burton and District Aero Club. (156, SHOBNALL ROAD.)

THE Good Friday competitions are:—1st, duration, any type of machine. Event 2, r.o.g., any type of machine. Event 3, distance in a straight line, any type of machine. A silver medal will be given as first prize in each event. A complete machine and other aeroplane material will be given as prizes. Fifteen entries have already been received for above. Junior competition, duration. A silver medal will be given to the winner. The Club are to give a waterplane exhibition in connection with the Burton Fête and Gala on June 27th, and flying exhibitions at the Burton-on-Trent annual flower show, for which each committee are offering valuable prizes. Model makers catalogues will be welcomed at the above address.

Monthly Report.—Weather has spoilt flying, but a great deal of work has been done in view of forthcoming Club Competition, Good Friday afternoon. As this is the first competition of the club the rules have been made very simple. The Treasurer of the Club, Mr. T. Smith, has given a gold centred solid silver medal, which is to be the first prize in event one. Three other silver medals have been given by Mr. C. G. Lamb, Mr. F. Robinson and Mr. G. Metcalf, to whom the club are very grateful.

Dundee Aero Club (4, FORRESTER STREET).

Monthly Report.—March 7th, Messrs. Robertson, Maxwell, Stuart, Thomson and Powrie out in Victoria Park. General meeting in Clubrooms Y.M.C.A. on March 18th. The Chairman, Mr. Luis, promised to present a Trophy to the Club, the winner to be the member with the best aggregate of flight in competitions during the flying season (March to August). One Competition each month, winner to hold trophy for one year. Type of machines for competition to be decided later. March 28th, 1st Competition for Luis Trophy, also for hydro-aeroplane, presented by Mr. Farningham, the late secretary: 1st hydro-biplane, D. Robertson; 2nd, aluminium propeller, Wm. Powrie. The competition was flown in a very high and gusty wind, but nevertheless some very good flights were witnessed. Robertson's model was timed 41 secs. out of sight. Hall flying his r.o.g. monoplane (which won first prize at Edinburgh) and succeeded in establishing a r.o.g. record for the Club, viz., 24 secs. Luis out with a fine tractor r.o.g. monoplane. Powrie with the only 0-1-1-P 2.

Edinburgh Aero Club (13, HERMANN TERRACE, EDINBURGH).

Monthly Report.—A great amount of flying has been done during the past month. Meetings have been held every Saturday at the Meadows, and although the weather has been far from perfect some exceedingly good flights have been made. On the 7th the first Sweepstake Competition was held, Mr. Hubbard being the winner with a flight of 21½ secs.; Mr. Watt was second with 18½, and Mr. Fiddis third with 15½. The wind was very troublesome. At a meeting held on Feb. 26th the various office-bearers and committees were appointed, and new members introduced. On Thursday, 26th, a night meeting was held at the Meadows, Messrs. Ross, Watt, Hubbard, Hogg, Saldier, Fiddis, Clark, Calder, Nesbitt and Ramsay, were present, and some good flights were achieved with the aid of fireworks. All the members are very enthusiastic, and several have been experimenting with hydro-aeroplanes, and it is hoped to hold such a meeting soon. The secretary will be glad to hear from any party who is interested and who would care to join the club. Annual subscription, 3s., payable half-yearly.

Finsbury Park and District (52, LAMBTON RD., STROUD GREEN).

APRIL 4TH, flying Finsbury Park, 2.30 p.m.

Monthly Report.—March 7th, Mr. Gibbs best flying with Etlich monoplane, Mr. B. H. Barnard with Blériot monoplane, S. Pratt, tractor Deperdussin; H. Mullin, monoplane; A. Richards, Avro biplane; R. Mullin, tractor monoplane. March 14th, B. H. Barnard (Blériot), highest duration, 28 secs.; S. Gibbs (Etlich), 36 secs.; A. Richards (Handley Page tractor); S. Pratt, R. Mullin, H. Mullin, and T. Steer all tractor monoplanes. Mr. S. Gibbs won the competition medal with 136 points; R. Mullin, second; and B. H. Barnard, third. March 21, members visited Aero Show. March 28, Mr. Savage twin-propeller (Canard type), highest duration, 30 secs.; A. Richards, best flying with scale Avro biplane and Albatross double-wing monoplane; S. Pratt with fish-tail monoplane; S. Gibbs, monoplane; F. Steer and B. H. Barnard, monoplanes; all tractors except Mr. Savage's twin-screw Canard.

Ilford Model Ae.C. (83, ENDSLEIGH GARDENS, ILFORD).

APRIL 5th, 12th, 19th, 26th, flying as usual, new Aerodrome, Hog Hill, Hainault Forest, Chigwell Row, at 9.30 a.m. (weather permitting). Members, please note.—Flying of models must take place from the foot-path and not from the brow of the hill. All motor cycles and bicycles must also be left on the foot-path. To members coming to the aerodrome by train.—A train leaves Ilford at 8.9 a.m., arrives at Fairlop 8.15 a.m.; for return—depart from Fairlop 1.33 p.m.

Monthly Report.—The Club's "red letter day" was undoubtedly Mar. 4th, the day of the "First Annual Social and Dance" of the above Club. It was most successful from a social and financial point of view. It was exceedingly gratifying to those who managed the dance, that the first venture in this direction should prove such a success—a splendid idea for filling the Club's coffers. There were about 70-80 guests present, who, without exception, asked if another could not be arranged this season. The three M.C.s. were Messrs. H. Corrigan, F. M. Connellan, and J. B. Fitzsimons. Now as to flying—Mar. 1st, weather fair, wind inclined to be boisterous at times. Large attendance of members. The "piece de resistance" was a flight made by "Lizzie," Mr. R. C. Nicholls' staggered back-swept-winged r.o.g. "pusher" biplane, which climbed at amazing speeds. Good flights were put up by Mr. Nicholls' "twin-pusher" r.o.g. monoplane, Mr. H. Oliver's "twin-pusher" h.l. monoplane, Mr. B. Seabright's tractor, Mr. G. Warren's tractor, hollow spar fuselage, and Mr. J. L. Hartnoll's "lightweight" r.o.g. "twin-pusher" monoplane. Mr. J. L. Hartnoll must be commended for the way in which his "lightweight" monoplane climbs and flies. Mar. 15th, wind, exceedingly boisterous; best performance put up by Mr. B. Seabright's twin-screw "pusher" monoplane. Mr. R. C. Nicholls' biplane "Lizzie" was soon put out of the running. Mr. E. Jenkinson's A frame monoplane, fitted with two propellers with blades shaped à la gull wing, showed itself a very capable flier. Mar. 22nd, good performances were put up by Messrs. R. C. Nicholls, E. Jenkinson, A. F. Lazell, G. Warren, B. Seabright, and J. L. Hartnoll. Mr. J. L. Hartnoll's monoplane, "lightweight" reached close on 150 ft. altitude, ending up with a beautiful spiral *vol plané*. Mar. 29th, weather good—inclined to be boisterous. Mr. B. Seabright must be credited with the "flight" of the morning; his A frame reached the ½ mile, the Club's record for distance. Mr. G. Warren's T frame "pusher" exceeded the ½ mile, and terminated in the lake. Mr. E. Jenkinson brought out a little "looper" that looped not, but flew some good distances. Mr. R. C. Nicholls' "roarer" got away well, and easily exceeded the ½ mile. It seems that this club ought to be

called a motor-cycle and cycle club for these were more in evidence than aeroplanes.

Liverpool Aero Research Club (62, CEDAR GROVE, LIVERPOOL).

ANNEXED are particulars of the flying contests in connection with the Exhibition, May 2nd, 1914, Y.M.C.A. Hall, Mount Pleasant, Liverpool. Admission tickets, 3d., may be had from the hon. sec., or Hobbies Depot, Manchester Street, Liverpool. Date and place of flying contests to be announced later. Entries are invited in the following classes:—Class I, rise-off-ground machines—tractor machines to receive 20 points allowance—1st prize, hand-painted diploma and cash prize 7s. 6d.; 2nd, certificate and cash prize of 2s. 6d. Class II, hand-launched (all types)—1st prize, hand-painted diploma and cash prize 7s.; 2nd, certificate and cash prize 2s. Class III, kites (all types)—hand-painted diploma. The above classes are open competitions. Class IV, open to members only—"Aero Research" Trophy and Diploma of Merit for best exhibit (either model or apparatus), or best performance during flying contests. In classes I and II each second will count as one point, design 10, construction 10. A. Entries will be received up to and including April 18th. B. Entrance fee of 6d. per model will be charged.

Monthly Report.—Beautiful weather Feb. 28th. Saw some grand flying by B. Tear, T. W. Bennett and A. G. Pugh at Walton. The "flexible wing" of B. Tear proving itself an adept at looping the loop, although high winds on the following Saturday rendered this a little uncertain. T. Bennett and A. G. Pugh trying to outstrip each other with pleasing results. Similar exhibitions at Sefton Park, March 7th, attracted a good audience despite lusty winds. A. G. Pugh finding tree-climbing necessary on two occasions after long flights, T. Bennett's model keeping more within grounds by circling. The latter gave his first kite-flying demonstration at club meetings, and certainly deserves great credit for the pitch he has obtained in bird kites, his example on March 7th proving itself most realistic in its deception of the hovering hawk. G. H. Kilshaw and W. Beale out Feb. 28th with 47-in. span r.o.g. tractor and h.l. biplane 33-in. span. The former machine rising off to about 15 feet, but on turning down wind landed too steep and broke propeller. Wind on March 7th greatly hindered work with this machine, and only flights of about 15 seconds were attempted. March 14th, B. Tear and T. M. Bennett out at Stanley Park; duration on 1-1-0-P2 machines, the former with looping model. M. Payne and W. F. Woods putting finishing touches to tractor machines. The most surprising performance of the month goes to the 21-in. span 1-1-0-P2 machine of B. Tear on March 22nd. This machine continually mounted to a height of over 80 feet, and on one occasion, after circling aloft at this height, made off finally in the distant lake. Even after this ducking it flew quite as well as before. The plane is built on the washout wing-tip principle and seems splendidly efficient. It would indeed be encouraging for the builder to try a r.o.g. slightly larger but on the same principle. T. W. Bennett out with kites and 1-1-0-P2. G. H. Kilshaw also flying 1-1-0-P2 and new tractor 33-in. span. Altogether the month has shown considerable improvement in outdoor work.

Scottish Ae.S. Model Ae.C. (5, DOUNE QUADRANT, GLASGOW).

On April 18th a Sealed Handicap Competition for duration will be held at Paisley Racecourse. Prizes 5s., 3s., and 2s. in goods. Entry fee 3d. All entries must be in by Monday, the 13th, to allow the official observers to draw up the handicap. A very handsome cup named "The Arthur Corbett Cup" has been presented to the club by Lord Rowallan, for the club champion in h.l. r.o.g.s. and waterplanes each year. Points being awarded for design and construction. The winner to hold cup for one year and receive a silver medal in commemoration of having won same. The competitions will take place as follows:—H.l. distance and duration, May 2nd, Paisley Racecourse; r.o.g.s., distance and duration, June 6th, Paisley Racecourse; waterplanes, duration, July 4th, Maxwell Park. The second half of the session having now commenced, intending members can now be enrolled. Subscription for half session ending Sept. 10th, 4s. Full particulars from the Hon. Joint Sec., Mr. Jas. C. Balden, 5, Doune Quadrant, Glasgow. April 4th, 11th, 18th, 25th, Paisley Racecourse, h.l., r.o.g.s., tractors, &c.

Monthly Report.—A most interesting and instructive lime-light lecture entitled "Balloons, Airships and Flying Machines," was given by Miss Gertrude Bacon on Feb. 25th, before a large audience. On March 18th, Mr. V. E. Johnson's paper on "The Use of Models in the Development of the Aeroplane," was read by Mr. R. M. Neilson on account of Mr. Johnson being unable to be present owing to the Aero Show. Mr. Johnson's absence was a disappointment to the members, as his coming was being looked forward to by all. The paper was listened to with much attention, and it was generally agreed that Mr. Johnson's proposals were on the right lines. Members visited Paisley Racecourse on March 7th, Mr. J. S. Ross having out his new single-screw h.l. mono. with built up body. Mr. J. C. Balden had also a new single-screw h.l. mono., and was successful in making two official Scottish records (also club records) for this type, namely, 52 secs. and 383 yds. On the same date Mr. T. Graham visited Renfrew to give a demonstration of model flying with his h.l. twin-screw and single-screw r.o.g., getting 60 secs. and over several times with the former. On 21st at Paisley Racecourse, Mr. J. S. Ross experimenting with h.l. twin-screw, best duration 45 secs. Mr. T. Graham with model of same type had several splendid flights at a great altitude, his best durations being 75½, 69½, 63½. On March 28th, at Paisley Racecourse, Mr. Ross had out his twin-screw h.l., his best durations being 41, 45 secs. Mr. Balden had out his new single-screw h.l. mono., and succeeded in raising the official Scottish duration record for this type to 71½.

S. Eastern Model Ae.C. (1, RAILWAY APPROACH, BROCKLEY).

FLYING meeting this week-end at Woolwich Common, Blackheath, and the Lee Aerodrome.

Monthly Report.—The final round of the South-Eastern Trophy Weight-Carrying Competition was flown last week-end in very boisterous weather, which necessarily considerably reduced the amount of "dead weight" it was possible for the models to carry. As previously announced in FLIGHT, the competition was for models of either the tractor or propeller types, not weighing more than 8 ozs., and capable of rising off the ground under their own power carrying a "dead weight" of not less than 1 oz., the trophy being awarded to the competitor having the highest product of weight carried (in ounces) multiplied by the duration of flight (in secs.). This resulted in a very popular and interesting contest, although many members found that, owing to the models having to make three official flights without suffering any structural damage, and also to undergo a rolling test, which under the weather conditions reigning at the time taxed the chassis to the utmost, they were unable to reduce the weight of their machines to 8 ozs. After several exceedingly sporting heats, the victor was adjudged to be Mr. A. D. Nicholls, whose entry, an r.o.g. hollow spar "A" frame, of exceptionally clean design, just weighed 8 ozs. This model carried a "dead weight" of 2 ozs. for 24 secs., thus being awarded 48 marks. Mr. Nicholls consequently holds the South-Eastern Trophy for the ensuing quarter, and also receives model aeroplane accessories to the value of 12s. 6d., kindly presented by Messrs. J. Bonn and Co., Ltd. Mr. A. F. Chinnery came second with a twin-propeller hollow spar mono. weighing 8 ozs., and carried 1½ ozs. for 35 secs., being awarded 45½ marks, and receives 7s. 6d. worth of Messrs. Bonn's

accessories, while the third prize (5s. worth) was awarded to R. E. Attwooll, whose model weighed 7½ ozs., and carried 1½ ozs. for 27½ secs., being awarded 31 marks. Several members, among whom may be mentioned Messrs. Westwood, Prance, Edwards, Jones, and Brown made praiseworthy efforts. The next South-Eastern Trophy Competition will be for hydro-biplanes, particulars of which will be announced next week. The usual flying meetings have been held throughout the month, and were very well attended. Mr. H. H. Groves has recommenced flying his steam models, and several members anticipate having power machines out very shortly. G. Brown, with his floating-tail mono., a single-prop. model and a twin-prop. biplane, and F. Edwards with an eccentric hollow-spar machine, and a very efficient "A" frame, have been very busy. E. Campbell is experimenting with a twin-prop. "box-kite," and G. H. Westwood's twin-tractor is still "going strong," while his enclosed fuselage mono. now emulates Gustav Hamel's feat of turning over sideways, afterwards continuing its ordinary flight path. But the "biscuit" for looping must be awarded to Mr. McLaughlin's single-propeller all-metal mono. which loops and loops and loops until one is tired of watching it. The altitude of these loops is very good and when so minded this model can attain a very good duration. A. F. Chinnery had some nice flights from a gull's-wing mono. and Mr. Prance has exercised a small "A" frame, while Messrs. C. and A. Beere's stud of tractors are still well to the fore, the former's huge "Futurist" mono. attracting considerable attention. Mr. Plummer's 20-oz. tractor monoplane upholds its name for reliability, and his duration model has been doing some fine cross-country work. This member's latest creation—a tractor with a built-up fuselage and fitted with a four-bladed screw—has been causing a sensation by flying as a mono. with the plane raised above the fuselage, as on the Blériot "Total Visibility" and the Morane-Saulnier famous "Parasol" type of monos., also with the plane in an orthodox position and as a tractor biplane, these adjustments being effected within five minutes. Messrs. F. Dixon and L. Deniss continue to fly their "A" frames and A. D. Nicholls his r.o.g. and water mono. Another "aerial acrobat" is a twin-prop. model flown by G. R. Vaizey, while a very stately "A" frame has been brought out by W. Jones and an exceedingly neat hollow spar monoplane by A. B. Clark. Members should note that subscriptions are now due and are requested to canvass their friends with a view to increasing the club's membership and so broaden the scope of the good work now being accomplished. Pamphlets and any other information will gladly be supplied if written application is made to A. B. Clark (hon. sec.) at the above address.

Southend, Westcliff and Leigh Model Aero Club (96, VALKYRIE ROAD, WESTCLIFF-ON-SEA).

Monthly Report.—The members have had their time fully occupied with their stand at the Southend Arts and Crafts Exhibition. The exhibits covered 90 sq. ft., showed intelligent construction, and made an attractive exhibit. The club members also formed a party to visit the Aero Show at Olympia.

S.W. Aero Club (86, STOCKWELL PARK ROAD, BRIXTON, S.W.).

A GENERAL meeting will be held shortly to formally constitute the club. The entrance fee will be about 5s. Meanwhile, the secretary (*pro tem.*) will be glad to hear as above of more members.

Twickenham Model Ae.C. (74, CLIFDEN ROAD, TWICKENHAM).

APRIL 4th and 5th, Directional control competition, prizes (1st and 2nd) presented by Mr. C. A. Golding. Apr. 11th, r.o.g. Competition. Apr. 18th, Waterplane meeting at Richmond Park.

Monthly Report.—Last month has been very unsatisfactory for flying, but, nevertheless, the club's activities have in no way diminished. Mar. 7th and 8th a change of ground was made, flying being done at Petersham Park. This change proved rather unsatisfactory, there being far too many trees for members who favour the flying-stick type. Messrs. Stagg, Williams, and Rice-Skinner out with tractors, and Messrs. Whyte, Barnes, Knowles, and Maynard with h.l. types. The meeting came to an abrupt conclusion on Sunday by the lack of soul displayed by one of the keepers, who, not appreciating model aero-flying as a scientific pursuit, asserted that "games" were not allowed. On Mar. 14th several members visited Hendon, those flying at Whitton including Messrs. Barnes, Stagg, Whyte, Franklyn, Ord and Knowles. 15th rain. Mar. 22nd Messrs. Stagg, Whyte, Maynard, Ord, Knowles, Barnes, Franklyn, Williams, Jucker, and Rice-Skinner were flying both tractors and flying sticks. Mr. Jucker, although a new member, has the distinction of starting the rage for heavy buses owing to the splendid performances of his 15½ oz. machine. On the 28th and 29th, Messrs. Stagg, Maynard, Williams, Barnes, Golding, Franklyn, Clayton and Rice-Skinner out, mostly with tractors. Mr. Knowles with h.l. biplane which flies at a high altitude ending with a good glide. Mr. Golding put up some very pretty flights with h.l. machine, which earned him his 2nd class brevet. Mr. Williams has also passed his brevet tests.

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